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Original Department.

Lecture.

ON HYGIENIC THERAPEUTICS.

A CLINICAL LECTURE BY DR. DUJARDIN-BEAUMETZ,

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Gentlemen: In the earliest period of human society man had only a few hygienic means at his command with which to combat disease, and the practice of medicine consisted only in the administration of certain drinks, in the application of heat and frictions; for the primitive savage, ignorant of the medicinal properties of the plants around him, was unable to make any use of them, and such therapeutics as he had were of a hygienic character. We find evidence of this in the customs of certain barbarous tribes who still live pretty much as did the primitive man of the stone age.

My friend, Dr. Hyades, who has passed a year among the natives of Terra del Fuego, has given us a graphic account of their mode of treating diseases, from which we see that apart from rubbings and vapor baths, administered by heating water under blankets with which the patient is surrounded, and cold baths which are always given to every lying-in-woman immediately after her confinement, these people bestow almost no treatment on their sick. They might, indeed, utilize certain medicinal plants which grow in that country, but they do not use them, being ignorant of their curative virtue. Only at the moment of the death agony they compassionately smother the dying patient to terminate his sufferings.

In proportion as man rises in the scale of civilization, we witness the advancement of hygienic and therapeutic means. We must go back to the ancient Hindoos in order to find the first rudiments of hygienic therapeutics, and among this people the treatment of the sick has for ages been a religious duty.

It is in the sacred books of India, the Rig Vedas, and the Code of Manou, that we find the precepts of this religious hygiene. The protecting deities of medicine, the Aswins, preside over everything that pertains to health. It is to them that the sick apply for relief, and to show you the important role attributed to air and water in therapeutics, I can not do better than cite certain passages from a sacred hymn of the Rig Vegas:

"O God, man staggers in his weakness—direct and help him; man commits grievous faults for which thou dost punish him—restore him to life.

"Two winds blow: one from the sea, the other from the main land. How the blast of the one revives, and how the other prostrates us!

"O wind, bring the remedy; O wind, dissipate the evil. Thou possessest all medicinal virtues; thou hast been sent from the gods.

"The wind speaks: 'I come to thee with health and happiness, I bring thee strength and beauty, I sweep away disease.'

"The waters are salutary, the waters remove sickness: in them is every kind of remedial power; may they give thee health."

Apart from these precepts of hygiene, the therapeutics of the Hindoos is simply a therapeutics of prayers and offerings addressed to the gods. This kind of primitive medicine offers nothing that is definite, and is rather fetichism than true art.

There was another ancient people that

gave to hygiene a much more poweful impulsion, while still preserving its religious character: I allude to the Jews, who found in the tables of the Pentateuch hygienic precepts which are just as applicable to our day. These laws regulated alimentation, the care of the person, ventilation, etc., and man was clean or unclean according as he religiously observed or neglected these precepts.

Egypt adopted and perpetuated the Hindoo practice, and instituted sacerdotal medicine, which was composed exclusively of hygienic observances, consisting almost entirely in baths, gymnastics, massage, and bodily exercise; if you add the usage of a few purgatives, you will have the sum of the means which they employed in the treatment of the sick. This aggregate of hygienic prescriptions was directed by laws and decrees which fixed the occasions for their administration.

But the nation which carried farther than any other these precepts of hygiene, forming of them a complete system, was the Grecian. This race was impelled in this direction by its love for beauty in all its forms: a passion which enabled the Greeks to create those master-pieces of art which we moderns have never been able to equal, and which have been the delight of the past, as they will be of future generations.

To show the intimate union of medicine with hygiene, the Greeks in their poetical mythology made Hygeia, the goddess of health, the daughter or wife of Esculapius. Moreover the pupil of the centaur Chiron (Esculapius) had at his command no means but such as were hygienic, and the priests who served at his altars at Cos and Epidaurus practiced only hygienic therapeutics.

The temples of Esculapius, placed near the sea-shore in the most healthy situations, surrounded with sacred trees, and erected in the neighborhood of natural or mineral springs, offered to the numerous patients who flocked there for the recovery of their health, all those desirable hygienic conditions which we to-day look for at our sanitaria.

Reclining on the steps of the temple, subjected to a special alimentary regimen, and favorably influenced from a moral point of view by the idea of the divinity present, and by the numerous votive offerings which, being hung on the walls of the temple, were a demonstration of the innumerable cures wrought in this place, the patients found themselves in the best possible conditions to obtain restoration.

These hygienic means were the only ones which the followers of Esculapius possessed. They barely supplemented them with the usage of certain simple herbs, such as hellebore; hygienic therapeutics, as we have seen, constituted the sum of their resources.

Then the Esculapians were divided into two groups; one remained attached to the temple, preserving their sacerdotal character —these were the sacred Esculapians; the others abandoned the temples and became the lay Esculapians, who traveled over the various parts of Greece and the East, and received, by reason of their journeyings, the name of *Periodeutes*. It is to this last group that the founder of medicine, the divine Hippocrates, belongs.

The contemporary of Socrates and all the illustrious men of the age of Pericles, Hippocrates was the first to establish the bases of the dietetic regimen of diseases, and in his treatises of medicine, he has given two chapters which were for many ages the sole guide of the physician in the hygienic treatment of disease.

In his treatise on "Airs, Waters, and Places," Hippocrates shows the importance he attaches to hygiene. These are his words: "Whoever would have a thorough knowledge of medicine, must not be ignorant of the subject of which I here treat."

But it is especially in the book entitled "Regimen in Diseases," that Hippocrates insists on hygienic therapeutics. He passes in review the different foods, dwells on the advantages and disadvantages of wine, and considers white wine as an excellent diuretic. According to him, garlic is a stimulant and acts on the kidneys; cheese is heating; lentils are astringent. As for the meats, fresh pork is hurtful, and he advises that this meat should be eaten cold. With regard to bread, he says that that which is poorly cooked gives rise to flatulence, while warm bread is of difficult digestion. Lastly, the originator of the use of baths in acute diseases, Hippocrates, counsels the treatment of inflammations of the lungs by warm fomentations. You will find, moreover, scattered all through his writings innumerable paragraphs referring to hygienic therapeutics.

For a long time the successors of Hippocrates followed the teachings of their master, but by degrees changes were introduced; for rational hygiene, empirical practices more or less absurd were substituted, and these attained their acme in the school of Alexandria. There resulted from this gross empiricism such abuses that there was soon a return to the doctrine of Hippocrates, and the most zealous reformer in this direction was Asclepiades, the Bithynian.

Asclepiades discarded all useless and dangerous drugs. He taught that sick persons should be sustained and restored to health by hygienic means alone, and especially by exercise. He recommended that particular attention should be bestowed upon the different emunctories of the economy, and especially the skin.

The Romans borrowed from Greece their knowledge of the arts and of medicine; and it may be affirmed that there were hardly any Roman physicians—almost all were Grecian, and the great majority came from the school of Alexandria. These medical men added but little to the doctrine of Hippocrates.

Celsus, in his fine treatise *De Re Medica*, devotes a long chapter to hygiene, the first in this work. This first book takes up the hygienic precepts which robust persons must follow in order to preserve their health; then in other chapters he traces the rules of diet in summer and in autumn, and shows that these rules vary, not only with the season of the year, but also with the temperament and age of the subject.

In the same age, *i. e.*., about the first century of our era, during the reign of Augustus, appeared the first indications of a hygienic practice which, resumed in our times, is one of the most powerful means of hygienic therapeutics; I refer to the employment of cold water in the treatment of acute diseases. It was Antonius Musa who was the first to apply this agency to cases of sickness, and by the use of cold water internally and externally he cured the Emperor Augustus.

Euphorbius, brother of Musa, continued the cold water treatment, but it was Charmis, of Marseilles, who practiced medicine in Rome at the same period, who carried the farthest the method of cold baths as applied to the treatment of diseases; and Pliny has mentioned the fact that it was a common thing for aged Roman Senators, obedient to the ordinances of Charmis, to shiver from the cold in the baths prescribed by this physician.

Then came Galen, who was destined to sum up in his writings the entire medical lore of antiquity, and serve as an authority to the generations that were to follow. In his works he does not omit hygienic therapeutics, and in his celebrated chapter on the *Care of the Health*, he shows the influence of the quality of foods, of exercise, and of rest, of waking, and of sleeping, on the progress of diseases. Only these hygienic precepts are buried in the midst of so much empirical rubbish that their value is considerably lessened.

From this moment, which may be considered as the declining point of Greek medicine, progress ceased to be made, and deep night settled over everything which pertained to rational therapeutics. The barbarians invaded Italy and the entire Roman empire, and that religion which was to conduct modern nations to a higher civilization —Christianity— directed medical practice into new paths, in which everything relating to hygiene was abandoned.

The people of antiquity, admiring physical beauty, were wont to put in usage all hygienic measures which were calculated to inspire strength and grace of person, and their philosophic, religious and social ideal was summed up in this one sentence: "The mind of a sage in the body of an athlete."

Christianity, on the other hand, addressing itself exclusively to the soul, in its fervid mysticism could but despise all attention bestowed on the body, that fleshly envelope and clog of the soul.

So firm and irradicable were these tendencies to neglect the body as being the baser part, to be treated with contempt and kept in subjection, that even at the present day there are religious communities distinguished by their neglect of the person and of the ordinary cares of hygiene.

The Arabs, who aimed to represent the traditional teachings of Galen, added but little to the hygienic precepts of the physician of Pergamos, and leaving to one side everything pertaining to hygienic therapeutics, they insisted much more on the employment of pharmaceutical agents, and we have to come down to A. D. 1100 before we find in the midst of this Middle Age chaos a few physicians attempting to bring medicine back to its original rational basis, and inculcating the practice of hygiene as a means of cure. This reformation was confined to the school of Salernum.

Situated on the borders of the Gulf of Salernum, this city, bearing the name of its gulf, was conquered by those hardy Normans who, returning from the Crusades under the leadership of Robert Guiscard, took possession of Apulia and Calabria. Here was founded, under the direction of John of Milan, a school of medicine which long possessed a great repute. This school was constituted by a strange medley of ecclesiastics, physicians, and female doctors, whose names history has preserved, and among which we find mentioned Trotula, Abdulla, Mercurias. But that which above all gave celebrity

to this school of Salernum is the work in leonine verses to which various names have been given, such as: "*Regimen of Health of Salernum*," "*Flowers of Medicine*," "*Medicine of Salernum.*"

(*To be continued.*)

COMMUNICATIONS.

ON THE PATHOLOGY OF SURGICAL INFECTION AND THE VALUE OF ANTISEPSIS.

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The subject of which it is my intention to treat this evening is so replete with food for thought and discussion that it seems endless. It also is inseparably connected with general infection, so that a discussion of the one necessarily involves a consideration of the other. No sharp lines can be drawn between the two. While it is my intention to treat the selected subject thoroughly, an effort will be made to refrain from all unnecessary mention of extraneous matter. Exception will be taken against the now so prevalent extreme methods of antisepsis during operation and subsequent thereto.

Personal experience in the frequent handling of dead bodies in various stages of decomposition, and dead of all kinds of disease, in connection with operative surgery, privileges me to have a say.

In this day of specialization also, when everything is apt to be viewed from only one standpoint by each individual, and this standpoint depending upon the special work the viewer is engaged in, it behooves some one having a more general interest in our work to look upon everything from all possible points of view for the purpose of establishing relative values. The neurologist, for instance, will claim every pain or ache as coming exclusively within his particular domain, while the operative surgeon will insist upon its being permanently curable only by instrumental interference.

Recognizing the scope and depth of this subject, the limited time allotted for its consideration, and being desirous of treating it fully and yet concisely, an effort will be made to arrange it in a systematic manner.

It is the object of this paper to take up the healing of wounds, the methods of so-called surgical infection, the cause of excessive surgical fever, the prevention of this condition, and the value of the general application of the germ theory and its logical outcome, antisepsis.

The prevailing fashion of unnecessarily lengthening a paper with a long bibliographical list will be ignored, and only such few references made as seem advisable. Advantage is hereby taken of this opportunity to again call attention to that most remarkable work of its kind—*The Index Medicus.* It should replace all those needless tails of reference that we find tied to papers of all grades. More numerous and complete references can be found there of the current literature on this subject than any single individual could otherwise collate.

Wounds heal essentially but in two ways. These may be and by some are denominated primary and secondary. The first occurs without the formation of pus, and the second is accompanied by suppuration. In the latter we have granulations and granulation tissue, while in the former healing takes place without granulations, although the process of repair results in an identical tissue.* Repair in all instances is effected only by the cell. The participation of the blood-vessels in this process is secondary, and their secondary function is to nourish the cells that are doing the work, thus continuing proliferation and growth.

All living tissues have common and special power of reaction. The common reactions are those of mere vitality, while the special reactions are the result of the performance of duties not essential to life. Thus every cell does the common work of maintaining itself. In addition to this, cells do their own special work as living individuals; for instance, the ordinary connective tissue cells, which form the framework that supports the essential elements of an organ and its nutrient vessels and nerves; or the cerebral cells, which preside over the volitions of the body and the associations of its various workings; while the liver, kidney, pancre-

* By suppuration I mean any fluid exudation from a wound's surface containing multinuclear cells—leucocytes. The so-called "union by granulation without suppuration" of the antisepticists is only apparently true. The object of suppuration is the protection of the granulating surface from extrinsic influences, particularly over-dryness and hardening of the surface. In proportion as there is diminished chance of evaporation there may be lessened pus formation, and more especially is this true when the surface is well protected by sponge or other suitable material, and dressings that are more or less sealed. This is true in very much the same way that it is that the amount of callus in a fracture depends largely upon the irritation of the broken ends of the bone and their displacement. I am well aware that this view of suppuration may seem new, but be that as it may, it is the sense in which the term is employed throughout the paper. Any exudate from a granulating surface will be found to contain leucocytes, and therefore is pus. It may only be detectable by its effects in preventing dryness and hardening of the surface. There is no such thing in reality as "healing by granulation without suppuration."

atic, and red and white blood cells are still different. It is by their common reactions that cells or tissues overcome disturbances. Let there be a breach of continuity in any of the tissues, and the steps by which the injury is overcome, or attempted to be overcome, are essentially the same in all. Perturbing influences, whether slow or sudden, will have definite effects upon all structures, but often as different as are those structures themselves. A wound of the brain and one of the skin heal essentially in the same way, but the manifestations and results are not alike. In the same manner a similar disturbing cause will affect differently various people or groups of people.

The connective tissue cell is the essential element of the body's framework. It binds together all our different parts. Whenever there is a breach of continuity, it is the *special* duty of this cell to make the necessary repair in restoring continuity. This is but in accordance with all physiological processes, as continuity depends upon the connective tissue, and when continuity is severed, this tissue is injured. Those elements which happen to be enjoying the support of this structure at the seat of the wound, have no connective function, they do not aid in the repair, they are injured and they die.

Repair is effected by proliferation. All the lower tissues proliferate when sufficiently disturbed, while the higher tissues never do. In inflammation the higher tissues perish, while the lower tissues increase. These lower tissues are embraced by the great connective tissue group. If higher structures proliferated, a man with nephritis or hepatitis ought to get larger and better kidneys and liver on that very account, but the truth is that the framework of the organ (the lower or connective tissue) is increased, while the higher, the essential secretory structure, is diminished—destroyed.

In all solutions of continuity, therefore, there is increased life and activity, proliferation of the connective tissue on the one hand, and diminished life and activity, death of the special cells, on the other. The dead elements are removed by absorption or by ecrysis. If small, as in a simple incised wound, absorption is the rule. If large, as in a lacerated or contused wound, ecrysis predominates, and we have a slough or gangrene. There may be, and often is, absorption without ecrysis, but never the latter without the former.

Proliferation is reduced to a minimum in primary union, and is excessive in healing by granulations. The former it is almost always our object to attain. The latter may conveniently be divided into three stages, as will appear. When a wound is just made there is a transudation of blood from its surface, and this is soon accompanied by a flow of lymph. A variable time after the trauma (depending upon its site, extent, and the patient's condition) there is added a flow of serum, and the hemorrhage gradually subsides, until eventually there is no longer any transudation from the surface of the wound. It begins to take on a glazed appearance, due to the coagulation of albuminous matter, variously known as coagulable lymph, plastic lymph, plastic exudate, etc. Somewhat in the same way as microbes are developed from gelatine and animal broth (nutritive gelatine), we find the superficial connective tissue cells of the wound's surface increase in size and number. The glazing of the surface takes the place of the microbist's gelatine, and the adjoining blood vessels represent the animal broth. The wounded connective tissue cells begin the reparative process. The increasing cells push forward like an advancing army, and the blood vessels throw out closely following loops in the same way that the food supply follows a body of soldiers—their functions are similar.* These loops, covered with cells, form granulations. Cell formation is so rapid that many are thrown off with modified serum to form the pus that covers the granulations, and protects them from dryness and other disturbing influences.

The three stages into which the healing of an open wound may be divided are—

1. The period extending from the reception of the injury to the glazing of the wound.

2. The time between the glazing of the wound and the formation of granulations and pus.

3. From the formation of pus to the end of repair.

The healing of wounds is retarded by two sets of causes—local and constitutional.

The local causes may be said to consist of 1st, Anything that will prevent perfect coaptation; 2d, anything that will reduce the local tonicity; and 3d, all sufficiently irri-

* I arrange myself by the side of those who do not believe the migration of leucocytes through the vessel walls to be essential to the inflammatory process—diapedesis—because of repeated failures to observe it after the most careful and persevering observance of an active inflammatory field. What I have seen appeared to be a proliferation of the vessel wall, either inwards or outwards, or both conjointly, and this agrees with Prof. Daniel Ayres' views on this subject. Still, I do not wish to be understood as denying the possibility of diapedesis, and the probability of its inconstant and infrequent occurrence. It seems to me most proper to define inflammation as increased cellular metabolism, with a failure to remove all or a part of the exudate.

tant foreign bodies. The first includes everything that separates the edges of the cut surfaces, and these may be large solid foreign bodies, blood, lymph, serum, water, air, gas, and drains of all kinds, as tube, horse-hair, or silk. The second comprises devitalizing or benumbing fluids and gases, and even a too free and continuous supply of water. The third consists of all kinds of irritating substances.

The constitutional causes are readily divided into nervous, muscular, vascular, and nutritive. General neurasthenia, in the broadest sense of the word, whether it be due to heredity, some chronic or acute disorder, or to anæsthesia, will materially retard or altogether prevent repair, if not properly and promptly counteracted. Lack of promptness may, and occasionally does, involve a loss of life, in consequence of the drain upon the vitality of the patient in ineffectual efforts at union. A flabby muscular apparatus will often, in spite of a fair nervous tonicity, be a barrier to typical repair, causing delay and sometimes failure. Vascular disturbances, by directly modifying local nutrition, interfere with the healthy healing of a wound as insufficient food supply diminishes the effectiveness of individuals who have to perform a given work within a specific period. General nutritive disturbances, as impairment of the functions of the stomach, liver, or kidneys, retard or prevent primary union, and sometimes even normal granulation, by diminishing the general vitality or resisting power.

Elevation of temperature a few degrees above the normal standard is called fever. Such elevation, however, is as normal in some pathological conditions as is the standard in health. Various affections have different thermic elevations peculiar to themselves. The reactionary rise of body heat after hemorrhage or injury is normal under the circumstances by which it is caused. That either general or local irritation will cause such a rise is beyond question. Even excessive anger runs the mercury up the scale.

Most foreign bodies irritate. Dead animal matter is a foreign body. It becomes particularly obnoxious while in process of decomposition. The dead elements on the surface of a wound between the connective tissue meshes, therefore, are foreign bodies, if not quickly absorbed, and produce a detrimental effect. The normal bodily temperature is most favorable to rapid putrefaction, and hence to rapidly converting its own dead tissues into sources of irritation. This is more especially true of lacerated wounds for self-evident reasons.

Many local irritations produce general disturbances. Increased activity of the cerebral cells, as in mental concentration, sufficiently perverts the metabolism of the whole body to elevate the temperature several degrees. A simple neuralgia due to neuritis will have its marked effect upon the body. Likewise a common felon. The same may be said of the painful recovery from an over-worked muscle. Many of these bodily disturbances are etiological factors in elevated temperature—fever.

Nervous excitations not appreciable by the mind cause reflex disturbances. As an example, take the gravid uterus and its accompanying emesis. Peripheral nervous irritation may be caused by a nerve being compressed, or under tension (stretched), or in contact with some irritant. An abscess in a dense tissue produces greater disturbances than one located in a very yielding structure. This is because in the former instance the local disturbance of the blood and lymph vessels and the nerves is greater than in the latter. An abscess grows, especially when it is encapsulated from the inner side of its wall. Surrounding structures are pushed aside. All intervening vessels and nerves are disturbed. The denser the tissue and the greater the abscess, the greater is the effect upon the body. Take, for instance, the general effect of a periostitis with effusion of pus between the bone and membrane. Here we have two very unyielding structures and a marked constitutional effect. Again, take for example the constitutional effect of congestions or inflammations of the tonsils or mammæ. From this it is safe to say that—

Those tissues which have the richest nerve supply and the densest consistence, as a rule, give rise to the most marked constitutional disturbance when congested or inflamed.

Hilton* has done perhaps more than any other single individual to demonstrate and emphasize the influence upon the body, as well as diagnostic importance, of pain, and the great therapeutic value of rest. Gamgee also deserves credit for valuable work of the same kind. John Hilton made elaborate dissections to trace out the finer nervous ramifications, and compared them with the clinical facts of his surgical experience. His investigations were thorough and far-reaching. He was one of the first to show a definite relation in many instances between thermal elevation and nervous irritation. He also proved that great attention was due to

*His remarkable work on the "Diagnostic Value of Pain, and Therapeutic Value of Rest," is one that no scientific physician can afford to neglect to read and study.

the nervous system, both general and local, in the repair of tissue, and that, too, whether or not the air was made a factor by contact with the lesion. He firmly fixed the one great fact, that the more perfect, absolute, and continuous the rest of an injured part, the more favorable were the conditions of repair, and the greater certainty was there of complete, rapid, and satisfactory recovery. Rest has such great therapeutic power because it results in a comparative increase of tonicity by enabling all the forces operating at the seat of injury to concentrate themselves upon the process of repair alone.

A bleeding surface does not absorb. A surface exuding plasma or serum does not absorb. A cover or envelope of coagulated albumen prevents absorption by the surface underneath. A wound, from the time of its inception until its proper closure, is under these varying conditions at different times. At first there is hemorrhage, then an exudation of plasma and lymph, which is subsequently followed by the coagulation of the albuminous constituents of these fluids. During this time absorption is impossible. It does not occur. When the wound is covered with this coagulated layer, it is said to be glazed. When a wound is properly glazed, there is no longer any exudate.* Given a wound in this condition, and free from irritant material, with perfectly coaptated surfaces, and their constant maintenance in this relation, and the result will be primary union. If such surfaces are approximated before glazing is complete, there may be, and as a rule is, still a little oozing of fluid, consisting of blood, plasma, lymph, or all. Given a wound with surfaces approximated, but imperfectly glazed, and gradually a foreign body, the exuding fluid, insinuates itself between the surfaces, separates them, irritates them and the subjacent cells, primary union becomes impossible, and if the tension becomes sufficient or the fluid undergoes chemical changes and thus becomes sufficiently irritant, a general disturbance of the whole body with a rise of temperature is the inevitable outcome. This a great many misname septic infection.†

Glazing requires a variable period. It varies at different ages, in different individuals of the same age, and in the same individual under different circumstances. Glazing depends upon the tonicity of the wound, and this in turn depends upon the local and general conditions already indicated, or is diminished, or destroyed, by the cause above cited.

A cause of atonicity of wounds now exists, and will remain with us, that our predecessors, up to the earlier half of this century, did not have to contend against. It is not appreciated at the present day except by a few. Attention was recently called to it by one of our most reliable surgical authorities —an unimpeachable observer. He saw the steady inroads that this cause was making, in marring the success of those surgeons who, previous to its advent, seldom met with failure. Prevailing methods, previously satisfactory, became unpopular, and were abandoned. Primary union was becoming a thing of the past. Surgeons all over were resorting to the open treatment of wounds—union with suppuration. It was noticed, but not explained, that wounds that were gently handled and left to themselves for open treatment, and on second thought, at the end of half a day or a day, were dressed for the purpose of obtaining primary union, resulted in union without suppuration more frequently than those that were dressed for this purpose immediately after the operation or injury. Few men, if any, at first saw any relation between the advent of anæsthesia and the proportionate failure of primary union, and it seems that those who did considered it only an unaccountable coincidence. Hamilton* dwells especially upon the retardation of glazing produced by the use of anæsthetics. He appears to be the first to have laid much stress upon this important point. It is directly due to local atonicity, and this in turn is caused by the general flaccidity induced by etherization or analogous conditions.

The retraction of cut tissues of an anæsthetized patient is not as great as those of one who is conscious. Operations upon paralyzed limbs do not succeed as well as those upon extremities that are not paralyzed. This difference is best observed in hemiplegics who have both sides injured. Careful surgeons have a well founded temerity

* By "glazing," I do not necessarily wish to be understood as meaning an albuminous coagulate sufficiently thick to be easily appreciated by the naked eye; but what I do intend is the cessation of exudation, with relative dryness and more or less gloss of the surface.

† For the sake of clearness it is perhaps well to state that it is not intended in this paper to use the term 'primary union" as synonymous with "primary adhesion." The idea expressed by the latter term is a fallacy, as it supposes that two normal surfaces can adhere and remain united without the inflammatory process that inevitably accompanies trauma. By "primary union" I mean a union which results without suppuration or surface granulation, and which it is not safe to disturb inside of several days, and which even after that time may be re-severed without very much effect. This is the most advantageous union that can be attained, and its rapid perfection in suitable persons has led to the misconception—"primary adhesion."

* The Art of Primary Union—N. Y. Med. Record, January 2, 1886.

about operating upon enervated structures.

The large failure of primary union after the advent of anæsthetics as compared with previous successes depended upon the diminution of tonicity produced by these agents. This mode of repair more often succeeded in those instances where the dressing of the wound was postponed for many hours than in those where such dressing was immediately applied, because glazing was only completed after many hours and the comparatively immediate closure of the wound was premature in the great majority of cases. How this objection was overcome, and what it led to, will be considered further on.

We next pass from the first stage of the process of repair to the second, extending up to the formation of pus and granulations. Given a perfectly glazed wound properly dressed, and primary union should be the inevitable result. Such a wound is inaccessible to extraneous matter likely to do harm. If properly cared for, the danger, if any, is intrinsic and depends upon the patient's general condition. Given, however, a wound that is bound to suppurate, I mean one that it is designed to allow to heal by granulation, and the second period becomes a field for speculation, and to this I shall recur.

The third and last period of the wound, the suppurative stage, is devoid of danger or risk, except from the effects of a mechanical or chemical character, such as blows, cuts, and corrosives. Granulation tissue, as previously indicated, consists of new blood vessels and cells. Lymphatics it has none. Neither is it possessed of nerves. *It does not absorb.* That this is a fact has been long ago demonstrated in an experimental way by Billroth * and others. But experimentation is not at all necessary. The practice of surgery is full of demonstrations. A contused and lacerated wound loses part of its tissue by the interference with the local blood supply, due to the injury done the blood vessels in the immediate vicinity. The extent of the slough cannot be ascertained until it is separating from the adjacent healthy living structures. These sloughs, despite their offensive character, view them any way we please, do not cause septicæmia and pyæmia. They are putrescent masses of animal matter, but do no harm except to delay union until they are thrown off. The same thing on a larger scale is seen in gangrene of the extremities and the spontaneous amputations that are the result. When these patients die, it is not from excessive fever, but from the strain upon the nervous system and the drain upon their nutritive resources. Treat these cases as you please locally, and the temperature remains above the normal, unless constitutional remedies are administered, or the excess of heat is carried off by artificial means, such as cold applications, as quickly, or even more rapidly, than it is formed.

The following may be considered a logical deduction from the facts thus far enumerated: *So long as there is any transudation from a wound there is no absorption by that wound.* It therefore follows that as there is transudation of blood, plasma and serum from the wound until glazing is completed, and as there is transudation from the wound of pus from the time granulations are formed until repair is completed, absorption does not, can not, occur during the first and third stages of repair. Of the intermediate stage more will be said below.

We all are aware that a number of patients under like environments and with similar injuries, together in one ward, will fare differently. The results will often be entirely out of all proportion to the kinds of traumatisms. A major amputation will survive with a clear history, while a minor injury or amputation in the adjoining bed will be the only source of worry in the ward to a house and visiting staff, until death puts an end to the suspense. Why is this? Both injuries may have been received under the same conditions, in fact may be due to the same cause and have occurred in the same place; both patients may appear alike in every way appreciable to our senses; both may receive the same care by the same persons; both have similar requirements and are served alike; yet why does one perish and the other recover? This is not a question of infection, although some would have it so. Surgical practice, especially military surgery, is replete with instances when wards filled with injured of all kinds were swept by an epidemic, so to speak, of hospital gangrene; and how is it that a certain proportion of the injured in these same wards, sandwiched between the foulest cases, not only survived, but never had a bad symptom? This is not a question of infection. The prejudice against ligaturing veins became trite and was overcome by original men. To-day veins, the largest that are accessible, are tied. The prejudice against this practice feared pyæmia from such a procedure, because the resulting phlebitis would throw pus into the circulating blood, cause excessive fever, metastatic abscesses—pyæmia. It does not. This, also, is not a question of infection. When occasionally a patient with a ligated vein becomes

* In his Surgical Pathology.

pyæmic, it is not because the phlebitis caused an absorption of pus, but because the patient had not the ability to react against the injury and the occurrence of those symptoms that characterize the condition known as pyæmia. His resisting and reactionary powers were defective. Veins, large and small, are cut in all operations, and must heal by inflammation, whether they are tied or not. If the pus gets in a vein, and thence into the circulation, it will do so because the patient has not the resisting power to avert the pyogenic process. In other words, he is predisposed constitutionally.

This leads me to formulate another rule, which is that *most, if not all, of the so-called infectious disorders are due almost exclusively, if not exclusively, to intrinsic and not extrinsic causes.*

These intrinsic causes may be formulated under the general head of predisposition, and this may conveniently be divided into hereditary and acquired.

The hereditary form may appear at, or shortly after, birth as an anatomical defect, or may only show itself during infantile development. On the other hand it may not exhibit itself till after the beginning of puberty. Warning may also be had of the existence of a defective tendency by some special subnormal physiological processes that are quite constant in, but peculiar to, the person affected.

The acquired predisposition may grow out of bad environments, as poor food, air, or light, exposure to cold or damp, or irregular mode of living; it may be due to intrinsic causes, as syphilis and other diseases, both local and general, or to bad practices or vicious habits. The degenerative period of life also furnishes abundant changes that go to make up a strong predisposition to diseases that had previously been ineffectual in encroaching upon the vitality of the organism. Every serious disease, like each grave operation, in fact all serious disturbances, are potent in lessening the vitality or resisting power of the individual, or, in other words, they aid strongly in the acquirement of a predisposition to disease.*

(*To be continued*).

*In view of the misunderstanding developed during the discussion of this paper, it seems not amiss to explain that by predisposition to surgical complications I do not mean predisposition to tuberculosis, or scrofulosis, inherited syphilis, or any of the well-known dyscrasiæ or cachexiæ, whether inherited or acquired; but a tendency irrespective of these to complicate traumatisms. Why do some women while in child-bed, after a typical labor, and days afterwards, without having had a bad symptom or any fever, develop a plugging of the femoral vein? Why do some women, without any apparent local or general trouble, develop the same condition? Allowing even the fallacious supposition to be true that the plug was derived from the uterine sinuses, where it was originally located as a clot, and we fail to explain why the clot, little enough to pass through the smaller uterine veins and those of the pampiniform plexus, should be arrested in a vessel of such large dimensions as the femoral vein, instead of going further down the limb, or, if hindered by valves and the blood current, into the heart and lungs. There is probably a double cause, local (in the vein) and general.

*Chas. D. Meigs, M. D., "Woman: Her Diseases and Remedies."

Medical Societies.

BALTIMORE GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY.

(*Concluded from page* 143.)

Dr. H. thought it very probable that had Dr. Ashby been present when delivery occurred in his case, and rendered proper assistance with the forceps, as he certainly would have done, and promptly removed the placenta, his patient's life would have been saved. It is to the last degree important in all cases of labor occurring in women suffering from organic affections of the heart, that the accoucheur be present from the commencement to the close in order to render prompt assistance in any exigency that may occur. But it is not always easy to discriminate between organic and inorganic murmurs so as to determine whether a given case has a functional disorder or an organic lesion of the heart—a practical point of great moment, to which Dr. Ashby did not allude in his well-written paper. Some years back, Dr. H. had seen a gentleman in consultation with his good friend, Dr. J. W. Houck, of this city. Six physicians, some of them excellent auscultators, saw the patient; three thought the loud systolic murmur indicated grave organic disease, and three were equally confident that it was inorganic, and induced by extreme anæmia. The latter's opinion proved to be correct, as the murmur completely subsided under appropriate treatment.

In that remarkable book which so charmed the medical mind about a third of a century ago, its eminent author* directed special attention to the difficulties encountered in *anæmia gravidarum* in distinguishing between true organic lesions of the heart, and what he terms "*seeming diseases of the heart.*" He draws, in his own striking and inimitable manner, vivid pictures of the latter, characterized by palpitation, great increase in the area of cardiac pulsation, dyspnœa, orthopnœa, etc. Even now, the chapter he devotes to the subject will well repay perusal. Dr. H. attended a bright mulatto

woman in the spring of 1862, during the last two months of her pregnancy, but was unable to be present at her accouchement. She was extremely anæmic, anasarcous, and suffered dreadfully from slight exertion. Anæmic soft and blowing murmurs were well marked over the heart and in the carotids, accompanied by a venous hum. But Dr. Meigs' statement that the most extravagant deviations in the heart's action in such cases are greatly lessened or wholly disappear so long as the woman remains at rest in the recumbent position, was beautifully exemplified. This is a diagnostic point of great importance; for, as Dr. Meigs forcibly states, though the derangements of the heart's action are frightfully aggravated, when organic lesions exist, by exertion, they do not wholly disappear in a state of profound rest.

Dr. George W. Miltenberger said that in his experience cases of confinement complicated by heart disease almost always resulted favorably.

Dr. Thos. Opie considered that, although the bellows murmur heard during pregnancy is generally due to hydræmia, yet he saw no reason why pressure of the enlarged uterus against the abdominal aorta should not cause a regurgitant murmur under certain circumstances at the aortic valves. He felt certain he had seen reference to the same idea in print recently. So long as there was the physiological slowing of the pulse following labor he felt safe, always considering an increase in the heart-beat shortly after labor as a warning of approaching hemorrhage, or later on of blood-poisoning.

Dr. Howard thought it very improbable that the pressure of the uterus or any intra-abdominal tumor against the aorta would cause *any* heart murmur. He would ascribe such a murmur either to anæmia or previous valvular disease.

Dr. T. A. Ashby closed the discussion by saying that he fully coincided with Dr. Erich's views in regard to the inadvisability of inducing premature labor or abortion in cases of pregnancy with advanced cardiac disease. There are two objections to the method: first, the effort of delivery in premature labor is, if anything, more injurious to these cases, and more liable to bring about disturbances of the circulation, than labor at full term. In the second place, premature labor almost of necessity involves the destruction of the child, and thereby jeopardizes two lives, whereas in labor at full term the life of the child is not necessarily complicated by reason of the existence of cardiac disease in the mother. In the case reported by Dr. Ashby, a vigorous healthy child was born, which to some extent compensated society for the loss of its parent. Dr. Ashby recognized the importance of the points stated by Dr. Howard. In the case he had reported the diagnosis of organic cardiac disease was carefully made and functional heart murmurs were discounted. The patient had no œdema, no anasarca, and her anæmia was not sufficient in itself to have accounted for the mitral regurgitation and aortic obstructive murmur. The patient had a previous history of rheumatic endocarditis, which unmistakably accounted for organic changes. He was clearly of the opinion that the hemorrhage following the delivery of the child was insufficient to account for the disturbance of the heart's action, and he believed that this loss of blood could have been avoided had he been present at the birth of the child. On the other hand, the hemorrhage was not sufficient in itself to have destroyed the life of the patient. Had the equilibrium of the circulation been provided for by compensatory arrangements, and the duty of maintaining the circulation been performed by the heart, its action would not have ceased. In referring to the prognosis of pregnancy in cardiac disease, Dr. Ashby agreed with the views expressed by the President and Dr. Howard. He thought Dr. Macdonald had taken too unfavorable a view of the prognosis. Macdonald had reported a mortality of 60 per cent., which was certainly very high. In a recent discussion before the Obstetrical Society of London (*Brit. Med. Jour.*, April 24, 1886, page 781), the subject had been discussed, and this view of Macdonald's prognosis had been expressed by several speakers. The practical point to be considered in connection with cases of pregnancy associated with organic cardiac disease, has reference to the treatment of the patient during labor. Knowing that cardiac disease exercises an unfavorable influence upon the prognosis of labor, the obstetrician should give close attention to these patients, and should see that the condition of the heart was not influenced by excitement or other causes liable to induce shock or suspended action.

Dr, W. E. Moseley reported the following:

A Case of Intra-peritoneal and Post-peritoneal Abscess.

Mrs. F., aged 25, a light mulatto woman, between two and three years ago, first noticed a painful swelling occupying the right iliac fossa, and which confined her to her bed for several days. The tumor developed rapidly, was accompanied by pain, was sen-

sitive to touch, and was coincident with a decidedly constipated condition of the bowels. The patient attributed the trouble to straining or bruising from carrying heavy market baskets. A blister was applied, and in a few days the swelling disappeared, and no more attention was paid to it until last November. At that time she was in the country nursing her sister, whom she had to lift and who was a very heavy woman, and while thus employed the swelling re-appeared. On her return home she was seen by various physicians, who gave her internal medication, but without producing any diminution in the size of the tumor.

I first saw her February 26, and at that time obtained the following history in addition to the facts already related; Menstruation had been regular and without marked pain until about seven years ago, when it ceased and has not re-appeared, but at each period since there has been some pelvic discomfort. She has never known herself to be pregnant. General health was always good until the first appearance of the tumor, nearly three years ago, since which time she has been failing. Bowels rather constipated, but appetite very good. Examination of the abdomen showed a well-defined oval tumor occupying the right iliac fossa, about six inches in its longest diameter, parallel to the crest of the ilium, and extending about three and a half inches toward the median line. It was somewhat sensitive on deep pressure, and had an elastic feel, as though there might be fluid confined beneath thick but tense walls. The swelling could not be felt per vaginam. There was a sharp cervico-corporeal anteflexion of the uterus, and on the left lateral wall of that organ was a small fibroid tumor about the size of a hickory-nut, with its attachment nearly on a line with the internal os. There was no connection between the abdominal tumor and the uterus. The bowels were constipated, but kept open by enemata and laxatives. The pulse averaged about 84, and temperature 99° +. The patient was confined to her bed nearly all the time from weakness, abdominal discomfort, and inability to walk. For about two months I tried the effects of counter-irritation with iodine and blisters, and the persistent use of heat, together with copious hot vaginal douches, and general tonic treatment; but the tumor increased slightly in size, and on April 20, assisted by Dr. C. H. Riley, a thorough examination was made under ether, which confirmed the results of the previous examinations. An aseptic hypodermic needle was introduced about two inches anterior to and on a line with the anterior-superior spinous process of the right ilium, and clear laudable pus withdrawn. Both Dr. Riley and myself thought that a free opening with drainage would give the patient the best chances of recovery in the shortest possible time; so, under the free use of $\frac{1}{2000}$ solution of bichloride of mercury, an incision two inches long was made two inches from and parallel to the crest of the ilium, and extending down to the peritoneum. The peritoneum and sac of the abscess were stitched together by two rows of interrupted sutures, three on each side, after the greater part of the pus had been removed by the aspirator. An incision was made between the rows of sutures, a rubber drainage-tube introduced and made fast to the abdominal wall, and the skin and muscle brought together by two silk sutures. About five ounces of pus were obtained. The abscess was washed out morning and night for several days with $\frac{1}{2000}$ bichloride solution, iodoform sprinkled around the incision, and the whole covered with tarred jute. The discharge was very slight from the first. On the second day the pulse reached 102, and temperature 101.9°, but after that the pulse ranged between 80 and 90, and the temperature between 98° and 99° F. in the axilla. The drainage-tube was removed on the fifth or sixth day, and the cavity washed out once daily. The patient sat up on the fourteenth day, and since then the cavity has been washed out every second day. The abdominal incision healed by first intention. There now remains a sinus extending about two inches inward and slightly upward, the induration is rapidly disappearing, and there is no more pus obtained than can be accounted for by the walls of the sinus.

The questions of special interest to me at the time of the operation were, in what tissue and from what cause did the collection of pus originate, and what was the prognosis? My opinion was that the abscess was intraperitoneal and due to an old perityphlitis, or in the cellular tissue behind the reflection of the peritoneum, with a decided bearing toward the former. The condition of the patient at the present time, I think, demonstrates pretty clearly that the abscess was not due to necrosed bone.

Dr. Howard had seen a somewhat similar case in a child four or five years of age. The abscess was opened freely and about a pint of pus evacuated. The child recovered.

Dr. Erich would consider the cause as probably perityphlitis.

Dr. Miltenberger thought such abscesses

frequently occurred without our being able to trace them to any specific cause. He thought the one reported by Dr. Moseley was probably situated in the cellular tissue behind the reflection of the peritoneum.

Dr. H. P. C. Wilson said he was absent at the last meeting of the Society when Dr. Chunn's paper, describing the removal of an ovarian tumor from a negro woman, was under consideration. As this operation was done at the Hospital for the Women of Maryland under his service, and by his assistant, he would be considered as endorsing the correctness of the case as reported should he hold his tongue. He now rose to protest against this case going on record as an ovarian tumor in a negro woman. It was clearly, to his mind, a tumor of the uterus. It grew from the whole posterior surface of the uterus as low down as the vaginal junction. It grew from the fundus uteri and also from the upper part of its anterior surface. It was attached to the left broad ligament and the left ovary. The tumor, the uterus, the left broad ligament, and left ovary, were so inseparably blended in one mass that he thought Dr. Chunn wisely decided that the only hope for the woman was to remove the uterus with tumor and left broad ligament and ovary as low down as they could be clamped. This he did, with the recovery of his patient. At the close of the operation, Dr. Chunn requested him to adjust his chain hysterectomy clamp prior to cutting away the mass; and in performing this act he had ample opportunity to observe accurately the growth of the tumor from the uterus and its adjoining attachments, and he was *then* satisfied that the tumor was uterine in its origin and growth, and he is equally satisfied *now* that it was a cysto-sarcoma of the uterus, and not an ovarian tumor. Although he had examined a great many negro women, he had never seen an ovarian tumor in one. He had consulted a great many physicians on this point, and had never found one who had seen an ovarian tumor in a negress. He had never heard or read of this kind of tumor being found in the African race. Dr. Atlee mentioned such a tumor as occurring in a woman three-fourths white; she was certainly not a negress. Dr. Chunn's operation was performed on December 22, 1885, and the patient died on April 24, 1886, after she had entirely recovered from the operation, and had been walking about the city for several weeks. Dr. W. T. Councilman, pathologist to the hospital, in his report of the post-mortem, says that he "found nodules on the surfaces of the liver and spleen, and all over the peritoneal surfaces. The omentum was rolled up into a solid cord as large as a child's arm. It extended into the pelvis and formed part of the mass found there. Microscopical examination proved the nodules to be sarcomas. It seemed certain that none of the tumors could be regarded as primary. It is probable that the original tumor, which was removed by Dr. Chunn, was a sarcoma, or had some sarcomatous tissue in it."

Dr. Howard said that he differed entirely from Dr. H. P. C. Wilson in regard to the diagnosis of the case under discussion, and was as positively certain as he could be in respect of any diagnosis whatever, that the case was one of *ovarian* cystoma. At the Woman's Hospital there is a law requiring that no capital operation can be undertaken in the Hospital without consultation between the surgeons in charge. In obedience to this law, Dr. Chunn brought the woman to Dr. Howard's clinic. There were present Dr. H.'s assistants at the hospital, Dr. Chas. H. Riley, Dr. Chas. O'Donovan, Jr., and also Dr. Chunn and Dr. L. Ernest Neale. Each of these gentlemen carefully examined the case, and all agreed that it was one of *fibro-cyst of the uterus*. Dr. H. dissented, and expressed the opinion that it was an *ovarian cystoma*. Dr. Neale requested Dr. H. to give the reasons for his opinion, and Dr. H. did so. It is well known that the frequency or infrequency of a disease is a matter of great importance in questions of difficult diagnosis, and that when one disease is frequent and the other proportionately rare, the physician naturally inclines to a diagnosis of the most common affection. But that, as in the negro race, ovarian cystomata and uterine fibro-cysts are almost equally among the rarest of all race affections in frequency of occurrence as an element of differential diagnosis, is not available. Still, it is a well-established fact that *ovarian* cystomata are everywhere much more frequent than uterine fibro-cysts; hence, in any case in which the diagnosis is narrowed down to these two affections, the chances are in favor of *ovarian* disease, unless they are impaired by some other clinical data that may be fairly considered as an offset. But Dr. H. knew of no such consideration that could be advanced in this case; on the contrary, they rather increase the evidence in favor of the case in hand being *ovarian*. Thus, we all know that the *rate of growth* in the two affections is, in an immense majority of cases, very different, and that uterine fibro-cysts usually grow much more slowly than ovarian cysts. In

Dr. Chunn's case about three years had elapsed since the woman had noticed that her abdomen was gradually enlarging symmetrically, from below upwards, and then measured fifty inches in circumference around the largest part of the abomen. And certainly it is *not uncommon* to observe ovarian cystomata developed to such a size in three years, while on the other hand it is *very uncommon* for a uterine fibro-cyst to attain such a size in the same space of time. Again, the age of the patient militated strongly against its being a uterine fibro-cyst. Thus, of 28 cases of fibro-cysts of the uterus cited from various authors in Dr. H.'s address before the American Gynæcological Society in Washington city in September last, only four were under 34 years; generally they were from 40 to 50. The only case of fibro-cyst of the uterus that Dr. H. had seen published as occurring in a woman as early as 24 years of age, was one reported by Dr. Hunter McGuire in the second volume of the *Philadelphia Medical Times*. But Dr. Chunn's case was only twenty years of age. Has Dr. Wilson ever seen or heard or read of any case of uterine fibro-cystic occurring at that early age in any woman of any country, race, or condition in life? But who is it that does not know that ovarian cystomata are *common at that age, and long before?* And Dr. H. repeated that, in respect of frequency of occurrence, whether in this country or abroad, it is a universally-admitted fact, that a fibro-cystoma of the uterus in comparison with an ovarian cystoma is a *very rare disease at any age.* In his immense experience, embracing more than 1000 laparotomies, Lawson Tait has only once seen a fibro-cystic tumor of the uterus.

Now, let us consider what light the operation threw upon the question at issue. When Dr. Chunn had cut down upon the cyst, what color did it present? It is well known that a dark and congested appearance is characteristic of a fibro-cyst of the uterus, and that it strongly contrasts with the clear, pearl-like conjunctival blue of most ovarian cysts. And so typical was the appearance of an *ovarian* cyst in Dr. Chunn's case, that when Dr. Wilson saw it, he said: "Howard, I believe your diagnosis is right." When the fluid was drawn off, it presented the dark chocolate appearance and unctuous character so often seen in ovarian cystomata. But when Dr. Chunn drew out the cyst, Dr. Wilson reasserted his original opinion that it was a fibro-cyst of the uterus. Dr. Chunn hesitated what to do, but finally removed the uterus somewhat above the junction of the cervix with the corpus. Dr. J. Edwin Michael, *Professor of Anatomy* in the University of Maryland, then carefully examined the specimen, and demonstrated to the entire satisfaction of all the physicians present who had diagnosed the case as a uterine fibro-cyst, that they were completely mistaken, with the single exception of Dr. Wilson, and that it was an *ovarian cyst.* When the specimen was subsequently exhibited before the Clinical Society of Maryland, Professor Michael said: "An examination of the specimen will show that the uterus is free from adhesions to the tumor on both its anterior and posterior surfaces, and is only connected with it by means of adhesions of the broad ligament. The tumor, in other words, having its proper pedicle on one side, had become adherent to the broad ligament on the other side, and these adhesions could have been ligated and cut, and the tumor removed, as is usual in such cases, with less danger to the life of the patient than that to which she was exposed in the operation done."* And, as Dr. H. was informed, there was not a dissenting voice in regard to the diagnosis of *ovarian* cystoma among all the physicians present, who saw and examined the specimen. Thus it appears that all the physicians who saw the woman before the operation was done, and committed themselves to the diagnosis of a fibro-cystic tumor of the uterus, and were subsequently present at the operation and personally examined the specimen, frankly confessed that they were mistaken in their diagnosis, and that Dr. Howard's diagnosis, from first to last, was correct—with the sole exception of Dr. Wilson, who stands solitary and alone in his erroneous diagnosis. And, further, that all the physicians at a meeting of a large medical society, who had never committed themselves to any diagnosis, and only saw and examined the specimen, were as one in the diagnosis of *ovarian* cystoma.

Dr. Chunn said that having reported the case under discussion as an ovarian tumor, which diagnosis had been questioned, he would give his reasons for the opinion he then held and still continues to hold. The whole history of the case pointed to ovarian disease, viz., the short time of growth (3 years), the youth of the patient (20 years), the shape of the abdomen, and the area of dullness and fluctuation. The facies ovariana was strongly marked. Moreover, when the abdomen was opened, there appeared a cyst of a *glistening, pearl-like hue,* containing a pathognomonic thick, *chocolate-colored* fluid,

*Maryland Medical Journal, April 24, 1886, p. 503.

which did not coagulate. These signs were given in every book on the subject he had over read as certain and undoubted evidence of ovarian cyst. In regard to taking out the uterus, he wished to make himself equally plain. The uterus was imbedded in the anterior wall of the sac, as he had before said, and was attached by the posterior and left lateral aspect, the right border only being free. All those who saw the pelvic relations *in situ*, viz., Drs. O'Donovan, H. P. C. Wilson, and himself, agreed that the attachments were of the most intimate character. The opinion of the other gentlemen present was derived from the relations of the tumor to the uterus *after extirpation*, as they had no opportunity to inspect the relations while in the pelvis. Their opinion was incorrect, and for the following reason. When the uterus and sac were cut away, in order to leave plenty of tissue in the bite of the clamp, the amputation was begun high up above the chain, and was made in an obliquely downward direction, so that, when the sac was at last taken away, only the left horn of the uterus went with it, the rest of the uterine tissue being trimmed away afterwards. This occurred because the chain of the clamp was hidden from view by the overlapping parts. And again, the uterus and sac being lifted up by an assistant as the cuts were made by scaipel or scissors at *different* distances above the clamp, the parts all spread out in such a manner that the relation of the uterus to the sac was simply impossible to be made out *after removal*. At the time of operation, he was of the opinion that those present were in favor of hysterectomy. Certain it is that no dissenting voice was heard until after the operation was completed.

Dr. Moseley was present at the meeting of the Clinical Society at which Dr. Chunn reported his case and exhibited the specimen. He had carefully examined the specimen, and had no doubt but that it was an ovarian cyst, and felt certain that was the opinion of all who examined the specimen, among them being Drs. Keirle, Councilman, and Tiffany. He did, however, consider that, *judging from the specimen shown*, the operation, *as done*, was not justifiable, as he believed the cyst could have been ligated and removed without involving any portion of the uterus.

Dr. Chas. O'Donovan, Jr., said he too wished to add a few words in regard to this case. Dr. Chunn requested him before the the operation to stand opposite him and sponge, which he did during the entire operation, so that, after him, he had the best opportunity of any one to see the condition of the parts in the abdominal cavity before the removal of the tumor; and he could state without hesitation that before the tumor, with the uterus, had been cut away, it was next to impossible to make out the exact amount or the locality of the attachments that existed. He knew that Dr. Chunn had been very severely criticised in his method of operating, by those especially who saw the tumor for the first time after it had been removed from its surroundings, when the cut edges of the enormously thickened broad ligament could be turned back, thus exposing the tumor from below, and giving a clear view at once of the location of the pedicle and its extent; but he desired to say in defense of Dr. Chunn, that the view he had of it during the operation and from above was very apt to mislead. The tumor, in developing, had gradually spread out the broad ligament and pushed it before it, being all the while intimately connected with its inner surface, so that to say at the time of the operation, when through the escape of the contents of the cyst mixed with blood the appearance of the different tissues in the cavity had become very indistinct, where the exact ending of the broad ligament lay on the cyst wall, was next to impossible. In more than one operation that he had witnessed, he had seen the same thing happen, but usually, by very careful inspection, it was possible to make out the line of junction, when by cautiously peeling off the ligament the cyst could be shelled out as it were from its covering. From the criticisms made upon this case, one might infer that Dr. Chunn hastily applied the clamp and cut off the uterus without making any examination of the attachments whatever, but nothing could be further from the case; he very carefully went over the mass more than once, both in front and behind, but nowhere could he make out the line of junction. It was only then that he determined to do a hysterectomy in preference to cutting away the great mass of the tumor and leaving part of the cyst behind. After the operation, when Professor Michael had demonstrated that the tumor was not attached directly to the uterus, as was apparent from the view beneath the broad ligament, it seemed plain to all, except Dr. H. P. C. Wilson, that the uterus should never have been removed; but he would repeat that until that moment it was impossible for any one to say for certain what was the attachment of the tumor. One word for the diagnosis. Before the operation, as Dr. Howard had stated, he and all

who saw the case, except Dr. Howard, inclined to the diagnosis of fibro-cyst of the uterus, but with a considerable margin of doubt; after the operation, we all, except Dr. H. P. C. Wilson, conceded that we had been wrong, and that the tumor was ovarian.

Dr. A. F. Erich exhibited a new tourniquet he had invented for the temporary compression of the stump in supra-vaginal amputation of the uterus. The tourniquet has the usual male and female screw, but the canula is made somewhat heavy, and the eye at the end large enough to allow the loop of a rubber tube the size of the little finger to be passed through. The ends of this rubber tubing, which is used in place of wire or catgut, are tied together and hooked over a stout hook attached to the shaft of the instrument. By this arrangement the tubing can be repeatedly loosened and tightened without the annoyance and delay occasioned by trying and untying the knot, or danger of bruising the parts.

The general impression of the members present was that the instrument would prove a very useful adjunct in the cases for which it was intended.

Dr. Robt. T. Wilson exhibited a new forceps for compressing shot, to be used in any plastic operation in which shotting the sutures was desired.

The general opinion expressed was that the forceps were unnecessarily heavy and the jaws too wide, as they would be apt to hide the suture they were fastening.

EDITORIAL DEPARTMENT.

PERISCOPE.

Case of Osteo-sarcoma of the Inferior Maxilla; Excision of the Growth—Weight Five and Three-quarters Pounds; Subsequent Œdema of the Glottis and Laryngotomy; Death on Sixth Day of Pulmonary Thrombosis.

Dr. A. B. Miles thus writes in the *New Orleans Med. and Surg. Journal* for July:

On March 31, 1886, a lean-looking but well-grown colored boy, aged seventeen years, entered the Charity Hospital, presenting an osteo-sarcoma of the inferior maxilla. His general health seemed to be in no wise impaired by the presence of the tumor; and, up to the time of his coming to the hospital, he had done the work of a farm laborer.

The tumor appeared in March, 1883, as a hard, painless lump at the symphysis; and, in three years, attained the remarkable size shown in the accompanying plates. For two years and nine months, it grew gradually; then, for three months prior to admission, it increased in size and rapidly. Upon entering the hospital, the following measurements were recorded: Occipito-frontal circumference of the boy's head, 22 inches; circumference of the tumor, 19 inches; measurements from the lobe of one ear to the opposite, 21 inches. The growth involved the maxilla from a point midway between the symphysis and the right ramus, to the articulation on the left side. Its encroachments upon surrounding structures may be inferred from the measurements given and the extent of the jaw involved. It bore down in front upon the thyroid cartilage, impeding its movements in deglutition, and, externally, pressed quite out of their natural course the jugular and carotid vessels. The enlarged ramus filled up the space between the mastoid process and the posterior border of the superior maxilla; and a lobulated projection from its inner surface pressed upon the pharynx. The malar bone and superior maxilla were both deformed by pressure. The former had been lifted out of its natural relations, while the pressure against the superior maxilla had been so great as to displace inward the alveolar process and molar teeth, and crumple the hard palate. The mass so nearly filled the mouth as to interfere with mastication and deglutition. Figs. 1 and 2 represent the appearance of the tumor from two points of view.

The tumor was entirely painless. It was simply an inconvenience, because of its size and weight, and its interference with surrounding structures. It had contracted no adhesions by infiltration or inflammation. Within the limits restricted by the size of the growth, the jaw was freely movable. Some of the adjacent lymphatic glands were enlarged, but the enlargement was simple and due to irritation from pressure. It is not in the nature of these osteo-sarcomatous growths to infiltrate. There were no evidences of constitutional infection.

In view of the boy's general good health, the freedom of the tumor rrom attachments to hinder its removal, and the strong proba-

bility of a permanently successful result, should the patient withstand the immediate dangers of the operation, it was determined to excise that part of the maxilla involved in the neoplastic growth.

FIG. 1.

The operation was performed Tuesday afternoon, April 6, in the presence of Drs. Bickham, Jamison, Archinard, others, and the resident staff of the Hospital; and with the assistance of Drs. Chaissagnac and Parham, to whom the writer feels specially indebted.

The following are the steps of the operation, described briefly: The patient was etherized, but in the latter part of the operation, when it was impracticable to prevent the risk of blood entering the windpipe, the anæsthesia was not complete. The tongue was threaded with a silver wire, and entrusted to an assistant. The first incision ran along the anterior aspect of the tumor, extending from the right angle of the jaw to a point opposite the lobe of the left ear. The second incision was carried along the under surface of the tumor, connecting with the first so as to leave an eclipse of redundant skin attached, and locate the line of union of the flaps about where the inferior border of the maxilla would be. The facial arteries were ligated before section, so the larger veins were clamped before division; and the quantity of blood lost was inconsiderable. The under-flap was dissected first, then the upper, leaving the cavity of the mouth widely open. The body of the jaw was sawed in front of the right ramus, and while an assistant lifted the tumor so as to make traction, the mucous membrane was peeled off and the posterior attachments severed. The most tedious step of the operation was the dissection of the left ramus, which had developed enormously, filling up the space between the mastoid and the posterior border of the upper jaw, and giving off a projection which rested against the pharynx at the base of the skull. The close relations with the internal maxillary artery made the dissection more tedious.

The patient bore the operation well, and suffered from shock less than expected. The wound was closed with deep sutures of silver wire

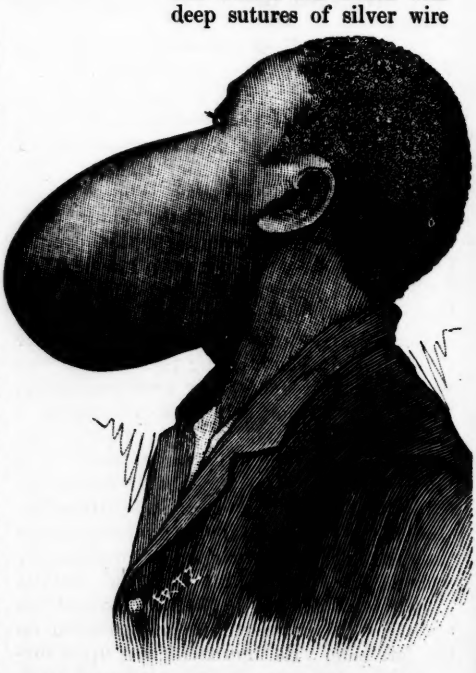

FIG. 2.

and intermediate sutures of silk-worm gut, dusted with dry iodoform, and dressed with the mercurialized materials—gauze, absorbent cotton, and gauze bandages.

It was impossible to appose accurately the surfaces of such a large and irregular wound. Consequently suppuration ensued, pus formed in the space between the mastoid process and the pharynx, and escaped at the upper end of the incision. An accumulation also gathered under the lower flap on the left side, and escaped along the course of the facial artery. The wound was irrigated daily with carbolized water, and dressed as above described.

On the morning following the operation the tongue was extremely œdematous, and the respiration labored and unsatisfactory. The patient was very restless and complaining. The symptoms very soon indicated an increasing œdema of the glottis. In the swollen condition of the tongue and fauces, intubation of the larynx was impracticable; laryngotomy was performed, and a tracheal tube inserted. The operation, as usual, afforded immediate relief, and added much to the patient's comfort subsequently, obviating the necessity of the painful traction on the tongue, of which he complained bitterly. The tracheal tube, no longer necessary, was removed at the end of forty-eight hours. No harmful effects whatsoever followed the laryngotomy.

On the following Monday morning the patient seemed to have successfully run the gauntlet of his greatest dangers and entered upon a fair way to recovery. He had at all times nourished satisfactorily. In spite of the high range of temperature during the first seventy-two hours, and the rapid pulse-beat, he expressed himself encouragingly; and really the chances never seemed to be adverse to his recovery.

However, during the forenoon of this day, patient became restless and slightly delirious. At noon his temperature had risen to 102⅘° F.; pulse to 140; respiration to 46. Observe the relative frequency of the respirations. As the afternoon advanced, his general condition became more critical, and he breathed with exceedingly great difficulty. He died of pulmonary thrombosis, having entered the sixth day after the operation. His death was unexpected, and the cause may be regarded as accidental.

The following account of the autopsy, made by Dr. P. E. Archinard, is given in the doctor's own words:

"The patient's general appearance was emaciated. The wound from the operation was united superficially in part of its extent. There were found two pockets of pus, one low down in the neck, and the other at the upper margin of the wound; the surface of the wound was suppurating, and at the bottom could be nakedly seen the carotid artery and internal jugular vein with one of its large tributaries.

"The abdominal organs and pleura were normal, the lungs anæmic. The heart was in diastole, with the left cavities empty. In the right ventricle, adhering to the columnæ carneæ and tricuspid valve, was a large firm ante-mortem clot, extending into the pulmonary artery to its smallest ramifications in both lungs. This thrombus, which, to all appearances was the immediate cause of death, did not occupy the whole calibre of the larger arteries; but in the lung substance seemed to completely fill up the vessel, though no embolism was found."

Figure 3 represents the macroscopical appearances of the tumor. Its external surface was even and symmetrical; its internal lobulated. A, indicates the head of the condyle; B, the lobular mass growing from the inner surface of the ramus, between the mastoid and the superior maxilla, toward the base of the skull; C, the only ulcerated surface, which was quite superficial and exposed at the orifice of the mouth. Observe the disarrangement of the teeth. In its structure, the tumor was typical of the osteo-sarcomatous growths, and weighed 5¾ pounds. It has been preserved in the Pathological Museum of the Hospital.

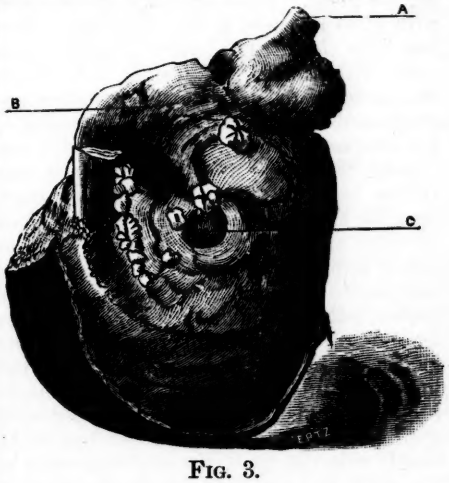

FIG. 3.

"MAN, ye might gie me a pennyworth o' something. I dinna ken the name o't, an' I forget what it's for; but ye'll ken yersel."

A New and Original Method of Surgical Dressing.

Dr. Charles W. Strobell, of Middletown Springs, Vt., writes to the *Medical Record* that he was led by the paper of Dr. Hamilton, and the criticisms upon it in recent numbers of the *Record*, to consider what improvements might be made upon the modes of antiseptic dressing now in use. The main objection to the ordinary dressing of cotton-wool, gauze, etc., is that it conceals the wound from view, so that inflammation, secondary hemorrhage, and other accidents, cannot be detected at their onset, and may become only too well established before the surgeon becomes aware of their existence. In order to obviate this, Dr. Strobell proposes to cover the wound with a thin glass globe, so constructed as to fit closely to the part, provided with two openings for drainage-tubes and a large opening on the top, to permit of access to the wound, in case of need, without removing the globe. These openings are provided with glass stoppers, so that they can be hermetically closed. The base of the globe is provided with a flange, and its sides, up to within two inches of the drainage-tube openings, are roughened so as to facilitate the adhesion of the isinglass plaster used in sealing it. When applied to stumps after amputation, a thin rubber band, three inches wide, is applied over the flange, so that it rests with one-half its width on the integument of the limb to secure additional safety. The flange is covered on its external surface with isinglass plaster, adhesive on both sides, so that the band of rubber shall adhere firmly to the globe. In the case of an amputation at the knee-joint, after the sutures and drainage-tubes are in place, the wound is capped with a disinfected globe of the proper size to fit snugly over the limb, the drainage-tubes in the globe being on a line with the anterior surface of the wound. The rubber band is now turned down over the limb, and strips of adhesive silk, one inch in width and twelve inches in length, are applied longitudinally from the upper part of the ground portion of the globe up the limb, each strip overlapping slightly the preceding one, a final strip being placed circumferentially around the flange and covering in the ends of the longitudinal ones. In a case of laparotomy an oval-shaped globe may be applied in a similar manner.

The following are the conclusions of the writer: "The method commends itself to the profession:

"1. In the complete isolation of wounds that can be obtained in the event of infection of hospital wards by erysipelas, etc., as the globe can be hermetically sealed.

"2. All changes can be noted clearly at any moment, with the minimum amount of discomfort to the patient, thereby increasing largely his chances of recovery.

"3. The perfection of drainage, which has never been obtained in so great a degree, obviating the necessity of soaking off bandages saturated with dry pus, blood, and serum, often adhering so firmly to the wound that the most gentle manipulation is required to avoid laceration of the tender granulations.

"4. Secondary hemorrhage can be detected at the earliest possible moment.

"5. The first evidence of inflammation can be noted and its movement forestalled by removal of the cause.

"6. The action of topical remedies can be observed without exposure of the wound to the air.

"7. The dressing can be adapted to wounds of almost every description.

"8. Refrigerant and thermal water-dressings can be applied with the utmost facility.

"9. Lotions or powders can be easily applied to the wound through the main opening in the globe without disturbing the dressings.

"10. If it is desired to prevent the ingress of infected air, the drainage-tubes can be filled with plugs of iodoformed or carbolized cotton.

"11. In the event of inflammatory swelling, rendering the constriction of the base of the globe excessive, the apparatus can be replaced by one of larger size with less expenditure of labor and time than is required in the application of a Lister dressing.

"12. Facility is afforded for determining the therapeutical effect and germicidal action of direct sunlight in the treatment of wounds.

"13. By means of long, slender forceps and scissors, the sutures, drainage-tubes, and adhesive plaster may be easily removed through the main aperture in the globe.

"14. The weight of the apparatus is not as great as that of the ordinary Lister dressing.

"15. If perfectly applied, there should be no more constriction of the limb than results from moderately firm bandaging.

"16. The expense is comparatively light, as the globes can be used indefinitely, being thoroughly disinfected by boiling water.

"17. The apparatus may be adapted to any external surface by taking, in special cases, wax impressions, and transmitting them to the manufacturer.

"In conclusion, I will say that my claim to originality is, in my opinion, well founded, as nowhere in surgical works have I seen glass mentioned, used in the way I have indicated, as a protective dressing."

The Preventive Treatment of Syphilis.

Dr. Charles E. Jennings thus writes in the *Lancet*, July 17th:

The following case is of interest, as showing how syphilis may be prevented by prompt local and general treatment before the chancre has arrived at maturity.

Early in November, 1885, Mr. A. B. C. consulted me for an eczematous affection of the skin, which itched intensely, associated with a few papules and vesicles, the eruption being sparsely scattered over the loins, buttocks, back, and upper arms. An aperient was prescribed, and glycerole of lead applications were ordered, but on November 11th the disease remained *in statu quo*. The aspect of the dermatitis, in part, suggested scabies, but the integument was healthy at those points which are specially prone to become the seat of scabies, viz: the clefts between the fingers and the flexures of the wrists. Moreover, the sarcoptes hominis was not detected microscopically, after careful search in the ordinary manner. The case was further complicated by the recent appearance of a hard, elevated nodule, the size of half a pea, with an inflammatory zone around, situated on the dorsum of the penis immediately behind the corona in the median line. There was a history of impure contact, and nearly three weeks previously the covering of the penis had become abraded during coitus at the precise spot where this small nodule had developed during the past three or four days. The lymphatic glands in both inguinal regions were slightly enlarged. The physical condition of the lesion on the penis led me to consider it a hard chancre not yet arrived at maturity, and, being immature, the prompt destruction of the chancre might arrest the elaboration of the syphilitic virus at the point of inoculation, and its absorption therefrom. Accordingly, the chancre and surrounding parts were freely painted with a solution of hydrochlorate of cocaine, to ensure anæsthesia, and the chancre was destroyed with Paquelin's cautery. I suggested that Sir William Jenner's opinion should be sought with reference to the skin affection. On November 12th, Sir William considered the dermatitis due to scabies, and that its origin around the loins and buttocks was caused by contagion implanted during congress coincident with the receipt of the syphilitic virus. He suggested the application of sulphur ointment to the affected skin, and thought that the free exhibition of mercury internally was also advisable in order to combat the effects of any portion of syphilitic virus already absorbed. This treatment was fully carried out, and the dermatitis quickly disappeared. The sore on the penis healed under iodoform dressings. The internal use of mercury was discontinued after six weeks, the patient soon regaining his usual health, and none of the secondary manifestations of syphilis have appeared. The success which followed the destruction of the chancre in this case by Paquelin's cautery, with the simultaneous employment of mercury, leads me to strongly recommend this course for syphilis, *before the chancre has arrived at maturity*, in preference to the opposite plan adopted by so many, viz: that of waiting for the appearance of secondary manifestations before commencing anti-syphilitic treatment. The use of cocaine is invaluable as rendering the caustic application painless.

Simultaneous Ligature of Right Carotid and Subclavian Arteries for Aneurism of Ascending Portion of Arch of Aorta.

J. A. Kelly thus writes in the *Lancet*, July 10:

The following case came under the care of Surgeon-Major E. Lawrie, M. B., M. R. C. S., Residency Surgeon, Hyderabad, Deccan, with whose permission I send it for publication.

W. de P——, a Eurasian, aged thirty-eight, had been under treatment since the early part of 1884 for repeated attacks of angina pectoris. He was also troubled by a hoarse cough, accompanied by frothy expectoration. The only treatment that afforded him any relief was hypodermic injections of morphia. In March, 1885, an aneurism was detected by Brigade-Surgeon T. Beaumont in the ascending portion of the aortic arch; and in August pulsation appeared on the right side of the upper part of the sternum. After a time three ribs were eroded, and a pulsating tumor as large as a tennis-ball showed itself under the skin. There was difficulty in swallowing solid food, which was rejected as soon as it passed the pharynx; and the patient was obliged to live on liquids, which he had to swallow carefully and slowly for fear of being choked. The right side of the neck and face was œdematous and livid; the voice was changed to a whisper; there

were paroxysms of angina with urgent dyspnœa, and a very troublesome cough. The pain had greatly increased, and, by preventing sleep, was impairing the patient's general health. No benefit was derived from absolute rest, Tufnell's diet, and large doses of iodide of potassium, and it was therefore decided to tie the common carotid and subclavian arteries.

On October 22, a hypodermic injection of morphia having been previously administered, the common carotid and subclavian arteries of the right side were ligatured, under the spray, with carbolized catgut. Chloroform was administered for the first incisions. Afterwards, anæsthesia was kept up principally by the local application of a 10 per cent. solution of cocaine. The edges of the wounds were brought together by horsehair sutures, and thickly dusted with iodoform, and dressings of cloth prepared in a 1 per cent. solution of perchloride of mercury in blood-serum, and dried, were applied. He was ordered fifteen minims of antimonial wine in an ounce of water every two hours. In the evening the pulse and temperature (which before the operation were 90 and 98° respectively) rose to 120 and 101.4°, but subsided the next day, and the wounds healed without inflammation by the first intention. Most of the urgent symptoms connected with the tumor abated within the first week after the operation, and the patient's general condition gradually improved, so that he was able to leave the hospital on December 18. The radial pulse returned to the right wrist eleven days after the operation.

The aneurism now (February, 1886) appears stationary, but still pulsates; pain has greatly decreased; swallowing is easily performed; and, with the exception of a dry cough, there are no pressure symptoms.

An Unusual Case of Malarial Fever.

Dr. W. G. Henry thus writes in the *American Lancet* for July:

Common as are the number of case of intermittent fever in this section of the country, I think the one I wish to report will prove at least slightly interesting in point of two reasons: Firstly, as being quotidian, and secondly as two exacerbations occurred within the twenty-four hours, making it "double quotidian."

Mrs. M., æt. 25, four months pregnant with first child. Complained of severe chills, followed by feverishness and sweating every day about 2 p. m., the attack lasting altogether about two hours.

Again, at 8 p. m., she experienced a similar onset of chills, fever, and sweating, just as had occurred six hours previously. Towards midnight she grew cool and would fall into a comfortable sleep and awaken in the morning feeling fairly well, when the thermometer would register about 99° F. in the mouth.

The rigors were so distinctly marked and occurred with such regularity that the diagnosis was very easy and the case most interesting from its being so well marked and rare a form of intermittent fever.

Proceeding as is usual in such cases, I administered quinine bisulphate; I gave it in capsules, each capsule containing five grains of the drug, and repeated the dose every three hours, doubling it about two hours before an expected rigor.

After three days of such treatment, I found the evening excerbation had disappeared, but the afternoon one remained; however, not so well marked.

In five days all rigors had ceased, and the patient felt quite well and able to perform her household duties.

I ordered her to take quinine thrice daily for a week, and my patient fully recovered to remain quite well until I was called to attend her in her confinement five months later, when I delivered her of a fine healthy female child. Here, again, malaria was her enemy and prevented her making the usual steady recovery, delaying it three or four days.

Different Preparations of Thallin in Enteric Fever.

Mr. Mayrhofer, during an epidemic of enteric fever occurring in a Bavarian regiment, employed thallin in three different forms—namely, the sulphate, the tannate, and the tartrate; and obtained highly satisfactory results from them all. He gave the drug according to Ehrlich's continuous system, the doses being generally 0.2 gramme, repeated when the temperature rose. From 1.0 to 2.0 grammes were given per diem. The total quantity required varied from 8 grammes in mild cases to 26 grammes in severe cases with relapses. After taking the medicine, a profuse perspiration occurred, which invariably appeared to improve the patient's condition. No unpleasant effects were ever observed. There were altogether eighty-eight cases, of which three (that is, 3.4 per cent.) died. It was not possible to say that one of the three preparations presented any marked differences in its action from the other two.

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CONNECTION OF SOME EYE DISEASES WITH NEIGHBORING LESIONS.

That affections of the mucous membranes of the nose frequently cause sympathetic diseases of the eyes is well known. The discharge of the lachrymal secretion through the nostrils forms alone a connection which may easily be the path of the progress of morbid conditions by continuity. But there are also some pathological states not so near to the eyes, and yet with sympathetic connection. We ourselves have seen occasionally inflamed submaxillary glands, especially before suppuration developed in them, and while the tissues go on swelling, give rise to conjunctivitis and even corneal inflammation of the eye, usually first on the same side, and especially if not neglected not rarely also attacking the opposite side. Some believe that these inflammations are due to circulatory disturbances. But if so, why is it just the eye that suffers from it? Why not rather some other still nearer tissue or organ? A better explanation is given us by the theory of bacteria, for the minute capillaries of the eye being smaller than any in their neighborhood may easily be obstructed by micro-organisms, which, starting and multiplying at the original seat of lesion, are finally carried into the circulation, and thus give rise to the eye inflammations mentioned.

Two articles have recently been contributed to the literature of the subject in question, viz., one by Dr. Ziem, of Danzig, in the *Allg. Med. Centrl. Zeit.* 20, 1886, and another by the same physician in No. 32 of the same journal. In the first article he refers to the frequency with which pharyngeal diseases produce inflammatory states of the eyes. Especially tonsillitis, whether acute or chronic, plays an important role in this respect; and some forms of chronic conjunctivitis, if due to this cause, cease only after the pathogenic element is removed by the extirpation of these glands.

In the second article Dr. Z. speaks of the catarrh of the Schneiderian mucous membrane, and cites cases to show how this condition produces sympathetic inflammation of the eyes. He ascribes the causal commotion to disturbances of circulation, though he admits that an aseptic treatment, if strictly carried out, has the most success. If we assume the theory of circulatory disturbances to be correct, we cannot explain the beneficial action of disinfectants or germicides.

One thing is sure, the sooner we get rid of the first morbid state of the kind mentioned the better it will be for the patient, and the

more those eye diseases will be prevented which are too often neglected by practitioners as unimportant, though many an eye has suffered irreparable damage from them.

PEDICULOSIS PALPEBRARUM.

Within the short time of two weeks three cases of pediculosis palpebrarum came under attendance at the eye clinic in Erlangen. As in each case the lice had been taken for blepharitis ciliaris by the physicians previously attending the patients, Dr. L. Rosemeyer came to the laudable conclusion to draw the attention of practicing physicians to their diagnosis (*Münch. Med. Wochenschrift*, 9, 1886).

The lice, which work themselves deeply into the skin and sit with their heads in the hair-follicles, look like yellowish-brown formations slightly larger than a pin's head, and may well deceive the observer, to whom they may appear as crusts adhering to the external margin of the lid. They can be, however, best recognized near the lashes, as in consequence of the ova there deposited, they appear to be completely covered with a brownish-black powder.

Occasionally the true picture of the pediculosis is masked by the symptoms of an eczema due to the scratching. In such case only a careful examination of the lashes by a magnifying glass can determine the true condition of things.

Besides inunctions with salve of white or yellow precipitate, the removal of the ova from the lashes is of the greatest importance, and it is best accomplished by laying the lashes on some firm support and by scraping off the ova with a dull knife. If such is not done the disease is apt to return a few weeks after a cure had apparently been established.

NOTES AND COMMENTS.

Sixty Cases of Sciatica Treated by Galvanism.

In the *Lancet* (July 17), Dr. W. E. Steavenson publishes the details of these cases, and thus concludes:

"The above sixty cases have been more or less under my care. Thirty-seven have been cured; one had a return of sciatica and was cured a second time; eleven improved only; two did not improve; concerning nine, I am uncertain as to the result; and two are still attending the hospital. Of those that recovered, three cases were cured with one application, two required two applications only, seven cases were galvanized four times each, two were galvanized five times, one case required six times, four cases seven times, five cases eight times, one case nine times, four cases ten times, two cases eleven times, one case twelve times, one case fourteen times, and three patients came fifteen times before they were satisfied that they were cured; one patient escaped my observation, and managed to get one or other of the students to galvanize him twenty-five times before I stopped his coming; he had been free from sciatica for several weeks. Of the cases which were not successful, one patient was, after death, discovered to have extensive necrosis of the ischium, with a sequestrum of dead bone. Another, a lady, was at the time suffering from some malposition of the uterus, which was tilted over on to the side in which the pain was felt, and no doubt exercised some pressure on the roots of the nerve. Although in this case the sciatica was not cured, the patient was so much benefited that she was able to get about the house again after eight applications. Before electricity was tried she had been confined to her bed for five weeks. With regard to the second unsuccessful case, I cannot well assign a reason for its non-improvement. The patient was a gentleman who had spent many years in the East Indies, and had suffered from dysentery and ague. He attended and was galvanized eight times, and as he was not then free from pain he did not care to continue the treatment. He tried several remedies afterwards, with the same unsatisfactory result. Perhaps if he had persevered longer with the galvanism he might have been cured, for several of the hospital patients attended as many as ten or fifteen times before they were quite relieved; but there is more difficulty in obtaining the prolonged and regular attendance of a patient who has to pay for each application than of one who gets his treatment gratuitously. The cases included in my list bear out the favorable opinion expressed by Dr. Stone, in his recent Lumleian Lectures, of the action of electricity in the treatment of sciatica."

A Case of Cholecystotomy.

The rather recent revival of operative procedures for the relief of obstructions of the biliary ducts, has awakened a new and lively interest in all such cases, especially as the entire number of reported operations falls within a total of fifty. To this list Dr. Charles T. Parkes, of Chicago, in the July number of *The American Journal of the*

Medical Sciences, adds a very instructive case:

Of the cases submitted to operations, by far the larger portion has been of cholecystotomy, by means of which a distended gall-bladder has been positively relieved, and in most of them the cause of obstruction, retained gall-stones, removed. In a few no gall-stones were found, while in others the cause of the obstruction could not be remedied.

In Dr. Parkes' case the gall-stones were not lodged in the gall-bladder, and it is highly probable that they were retained in some of the dilated hepatic ducts, and were washed into the cyst by the flow of biliary fluid which came on immediately after the formation of the fistula. He is inclined to believe that they had but little to do with preventing the flow of bile into the intestine; at least the patulency of the passages was not restored by their removal. The remarkable and profuse flow of muco-biliary fluid, coming through the sinus established, argues very strongly in favor of the operation which contemplates the formation of a fistula in the gall-bladder in distension thereof by confined secretions. Certainly no tube of the dimensions of the ductus communis choledochus could have given a free exit to the secretions; at least, the accompanying back pressure on the walls of the cyst would have greatly endangered, if not certainly destroyed, the adhesions in any recent wound thereof, even when protected by the continued suture. Most of the cases of reported cholecystotomy tell of the presence of a freer flow through the fistula, so that it is a condition to be expected, and makes immediate closure of the bladder wound without drainage a dangerous proceeding to adopt, even if we can be positively sure of a clear common duct.

Dr. Parkes, in conclusion, advises from his experience in this case, the general practice of sounding the common duct through the external opening. He is quite sure that such procedure can be safely carried out, and equally certain that its adoption in his case resulted in relief that did not follow the removal of the calculi alone.

Treatment of a Form of Diarrhœa in Children.

Dr. James Braithwaite thus writes in the *Brit. Med. Jour.*, July 17:

There is a form of diarrhœa in children, usually occurring after weaning, and from that period to four or five years of age, which is characterized by the most horrible offensiveness of the motions. This is so marked, that it is generally at once mentioned by the parents. It is commonly met with in summer, but is not strictly what is known as infantile diarrhœa, in which disease the stools are sour, but not necessarily fœtid. Probably this form of diarrhœa differs from the diarrhœa of younger infants, in being caused by the growth of the ordinary bacteria of putrefaction. It is not amenable to treatment by any astringent, nor has any alteration of diet much effect upon it,

It may, however, be successfully treated by disinfecting the bowel contents by means of salicylate of iron, as in the following prescription, which is suitable for a child two years of age: Sulphate of iron ℈j; salicylate of soda ℈j; glycerine ʒiij; water to three ounces. The iron and the salicylate should be dissolved separately, and the solutions mixed. The color is darker than port wine, and the taste not unpleasant. One teaspoonful must be given every hour, until the stools become well blackened, which happens in about twenty-four hours; or a larger dose may be administered at longer intervals. The medicine should then be given every three or four hours, and occasionally a small dose of castor oil, to clear the bowels well out, and to get the secondary constipating effect of the oil.

I have employed this mode of treatment for many years. It was one result of a long series of microscopic observations upon the action of reagents upon the bacteria found in putrefying animal fluids, which I read before the Leeds and West Riding Medico-Chirurgical Society eleven years ago. The addition of the salicylic acid to the iron I made more recently.

In hospital practice, and amongst the poor, it is not so successful as it would be if it were possible to remove the child from the family living room, the air of which is usually very impure, and is made worse by the smells incidental to cooking, and the presence of a sink.

Electric Baths in Eye Diseases.

Professor Denti, writing in the *Annali di Ottalmologia*, states that he has found electric baths and douches very valuable in several ophthalmic affections, especially in those which refused to yield to more ordinary methods of treatment. His apparatus consists of a vessel of water placed at a height of two metres above the patient's head, a constant current battery of thirty

cells, and a glass or ivory box without a bottom. This box is fitted on to the eye. It contains a metal pipe communicating by an india-rubber tube with the water vessel, from which the box can be filled with water; an efferent non-metallic pipe is also provided. The metal pipe is connected by wire with one pole of the battery, the other electrode being placed on the forehead or crown of the head. The sittings are of from four to six minutes' duration. For baths eight or ten cells are used, for douches twenty or more. No unpleasant effects have ever been observed, the stimulating action being only sufficient to produce a slight degree of hyperæmia. The author finds that the baths are best in deep-seated affections, such as those of the vitreous or of the optic nerve; the douches are useful in more superficial affections, such as those of the conjunctiva and cornea. Dr. Denti tried the electric baths in six cases: four of atrophy of the papilla in different stages, one of disseminated cloudiness of the vitreous, and one of double ulcerative blepharitis. The papillar atrophy was benefited most when it was slightest. In one case of atrophy accompanying disease of the spinal cord, the intra-ocular affection was, or appeared to be, arrested. The patient with the cloudy vitreous was so much improved that, though at first he could scarcely distinguish large objects, after thirty sittings he was able to read ordinary print. The patient with blepharitis was completely cured. The douches were employed six times: in three cases of paralysis of the eye muscles, and in three of exudations remaining after ulcerative keratitis. One of the cases of paralysis was entirely cured, the other two being improved; and in the cases of keratitis the success was most marked, the exudation being completely absorbed.

Electrolysis for the Treatment of Urethral Stricture.

Before the Academy of Medicine in Ireland, Mr. P. J. Hayes read a paper on the treatment of urethral stricture by electrolysis, the comparatively novel method practiced by Drs. Robert Newman, of New York, and S. T. Anderson, of Bloomington. He gave the details of three cases, in which he had himself adopted the method with encouraging results. He strongly advocated the trial of electrolysis, even for the most complicated forms of stricture. It did not at all interfere with the subsequent employment of other measures, minor or serious. Electrolysis was best adapted for the treatment of annular strictures rather limited in length. Having ascertained the situation of the stricture, the tip or exposed metal bulb of an electrode ought, if possible, to be lodged within it; or, if this was impracticable, the tip must be in close contact with the anterior face of the stricture. Then a small galvanic battery was connected by its negative pole with the urethral electrode, whilst the positive might be attached either to a moist sponge electrode or, better still, to a thin metal plate covered with moistened chamois leather. The positive electrode would be advantageously applied either to the patient's perineum or against the inner side of one thigh. As to the strength of the current to be employed, the patient's own sensations would prove the best guide. The current should be perceived, but it ought not to be pushed to cause pain, nor should the surgeon attempt more than it was needful to effect at each sitting, using only mild currents, and manipulating the electrode with gentleness, and never pushing it through the stricture, as it accomplished more by being allowed to remain in the stricture than by being caused to quickly transverse it. The sittings might be repeated every ten days, if desired. Cauterizing would be produced when strong currents were employed; but, with mild currents, the gradual breaking up of fibroid tissue was effected by a combination of chemical decomposition and vital absorption until but a thin lamella of cicatricial tissue remained to mark the seat of the stricture.

Salicylate of Cocaine in Asthma.

A comparatively new method of treatment in asthma nervosum has lately been tried by Professor Mosler, of Greifswald. It is now well known that cocaine has not only a local action on the sensory nerve-endings, but also a central one, which at first stimulating to the nerve-centres, may, if the drug be pushed, become sedative, or even narcotic. By this peripheral or central effect, it may, therefore, act in such spasmodic diseases as asthma. Early last year, Beschorner published two cases of this disease which were much benefited by cocaine. In three cases, Professor Mosler has obtained excellent results. All these cases occurred in young people of twenty-three to twenty-five years of age, and were uncomplicated by any organic heart or lung disease. The drug was given subcutaneously, in doses of 0.4 gramme, at the commencement of the attack. The first patient, who had a bad fam-

ily history as regards lung disease, and in whom the asthma had lasted eleven years, was relieved after the third injection; two more doses caused abeyance of the attacks (which occurred previously every day) for a fortnight, when the patient was lost sight of. In the second and third cases, the treatment was more rapid in cutting short the attacks, which in the end were postponed for the three or four weeks during which the patients continued under observation. The injections caused, in one case, a slight sense of faintness, and the appearance of dark spots before the eyes; but these symptoms soon vanished. It is, of course, impossible to draw from these cases any conclusion as to the permanent benefit of the treatment. Extended experience will perhaps show that the drug is only a palliative. It is in the hope of inducing other practitioners to try the treatment that Professor Mosler has published the results of his cases.

Calculus in Women.

Dr. Wedensky, of Moscow, where stone prevails, has published in the *Vratch* some interesting statistical records of vesical calculus in women, as well as the results of his own experience. He notes that Hugenberger, after having examined 40,000 women for various diseases, did not come across a single case of stone. Winckel observed one case in 2,500 female patients. Sir Henry Thompson's statistics are well known in this country. Between 1808 and 1841, Bassoff, of Moscow, treated 2,989 cases of calculus, only 75 occurring in women. In the same city, Klin, between 1822 and 1860, had 1,792 cases, 4 being females. Twenty-five out of Mamonoff's 700 cases were women. Dr. Wedensky himself observed 980 cases in the Marien Hospital; 27 of these occurred in women. Thus, about 2 per cent. of cases of urinary calculus appeared in patients of the female sex. Lastly, the same surgeon has operated 29 times on females. In 3 cases the stone was removed by dilatation of the urethra, and all recovered. Dr. Wedensky prefers this method, done gradually on Simon's principle, when the stone is small. In 13 he performed lithotripsy; 2 of these cases died. He considers this operation by far the best method of treatment for large calculi, and, if the surgeon object to it, he recommends suprapubic lithotomy. In 3, Dr. Wedensky made a vesico-vaginal section, 1 dying. He objects to this plan, as being liable to leave a fistula. In 10 cases he performed lateral section, losing 3. He now rejects this operation entirely, as it leaves a troublesome and permanent cicatrix.

Dieulafoy on Bright's Disease without Albuminuria.

In a paper recently read before the Société Médicale des Hôpitaux (Paris), the author has described several cases of Bright's disease without albuminuria. The first patient was a woman, whose symptoms seemed to point to gastric ulcer. She had violent pain in the epigastrium and hæmatemesis; she also complained of constant headache, and was losing flesh gradually; the urine never contained any albumen; slight epileptiform attacks were followed by coma and death. At the post-mortem examination, the kidneys were found enlarged, and the microscope revealed the usual lesions of mixed nephritis. In the second case, the most characteristic symptom was a paroxysmal dyspnœa, which could not be explained by any lesion of the heart or lungs; there was a frequent desire to micturate, and the patient also complained of headache; the urine was scanty, but contained no albumen, except on the day which preceded the death; the necropsy showed that there was a well-marked inflammation of the interstitial tissue of the kidneys. Several other cases of a similar description have been observed by Dieulafoy, who concludes that the urine sometimes remains quite free from albumen in Bright's disease; this is especially the case when the lesions are more advanced in the vessels than in the glandular substance of the kidneys.

Chronic Abscess of Female Urethra.

Before the Obstetrical Society of London (July 7), Dr. Herman read a paper on a case of chronic abscess of the female urethra. The patient, aged forty-seven, had for four years suffered from dysuria, about two years from dyspareunia, and irritability of bladder, these symptoms gradually increasing in severity during this time. There was a tender swelling between the urethra and vagina. This burst into the urethra, pus being discharged. Examination with the finger through the dilated urethra eight days afterwards showed that the cavity was then about the size of half a walnut, with a soft, ragged, friable wall. Its interior was cauterized with nitrate of silver, and it soon contracted and disappeared. Four months afterwards the patient continued quite well. The author thought that there were two possible explanations of the origin of the abscess: 1. That

it was the result of chronic congestion of the urethra, such as that described by Sir C. M. Clarke. 2. That it was a suppurating cyst. Abscess from either of these causes was rare. He quoted three cases that he had been able to find recorded. He gave reasons for thinking that the abscess in his case was probably not a suppurated cyst, and that the case was therefore to be classed with those of congestion of the urethra described by Sir C. Clarke and Dr. West.

Lanolin as a Basis for Ointments.

In a preliminary note in the *Russkaia Meditzina*, No. 12, 1886, p. 207, quoted in the *London Medical Record*, Dr. L. K. Pavlovsky, of Kharkov, writes that his experiments with Liebreich's lanolin (first in Russia) enable him to arrive at the following conclusions: 1. Narcotic extracts, when combined with lanolin, are absorbed by the skin "quite satisfactorily," their pain-relieving action being obtained "with an almost perfect certainty." The dose used was only twice as large as that for internal use. 2. Hydrochlorate of quinine is absorbed also very easily. This statement is based on four cases of intermittent fever in children, where lanolin and quinine inunctions rapidly gave the effects desired. 3. When a lanolin ointment, with iodide of potassium, is rubbed in, iodine appears in the urine not sooner than two, four, or six hours after inunction, while Lassar obtained iodine from the urine about three minutes after friction. 4. In children, lanolin is better absorbed than in adults. 5. Washing the skin with ether considerably facilitates the absorption of lanolin ointments. 6. In general, lanolin is a substance which promises to supersede all other constituents for ointments, and even, in certain cases, to render superfluous the internal use of drugs.

An Instance of Seemingly Unusual Susceptibility to Ether.

Dr. George W. Squires, of East Avon, N. Y., reports the following case to the *Med. Record*, July 24:

Mrs. W., forty-five years of age, housewife, fell down stairs, striking her face against the railing, from which she sustained quite a severe contusion of the right cheek, with effusion of blood under the conjunctiva, from the outer canthus to the margin of the cornea. When first seen she was suffering from a slight frontal headache, for the relief of which the writer applied to the forehead not more than six or eight drops of sulphuric ether with a camel's hair brush. The patient at once said, "That is ether, and it is putting me to sleep," and in less than half a minute she was fully under the influence of the anæsthetic, remaining unconscious for several minutes, and upon recovery, and for some time afterward, presented all the symptoms following profound and prolonged etherization. She could not have inhaled more than three to five drops of the ether, as it was immediately washed from her forehead.

Acetate of Copper in Pulmonary Diseases.

M. Luton recently communicated to the Academy of Medicine of Paris a memoir on the therapeutic use of acetate of copper, principally in pulmonary tuberculosis. He prescribed this salt in a daily dose of 1 centigramme, which was mixed with 25 milligrammes of extract of opium. In this form it was perfectly tolerated by the patient, and produced sleep. The pills were taken in the evening. Under the influence of acetate of copper, M. Luton had seen cough, expectoration, high evening fever, and nocturnal perspirations diminish. At the same time, the stethoscopic signs revealed an amelioration of the pulmonary lesions, but the appetite did not improve. M. Luton thinks that the hectic fever of phthisis had given place to a continuous fever of an infectious nature. He also considered this action to be parasitic and specific; but his colleague, M. Poncer, regarded the salt as a tonic and stimulant.

Anderjou.

Anderjou, or Anderjoa, or Indurjuo, is the seed of the *Holarrhena antidysenterica* described by Waring ("Pharm. of India," 1868, p. 137). Its bark was formerly imported into Europe under the name of *Codaja pala*, pala bark, and Tellichery bark. It seems to have fallen into discredit in consequence of being mixed with barks of other species. But it is still used very extensively in the island of Mauritius as an anti-dysenteric remedy, especially in the form known as "remède Mauvis." According to information given in the *Bulletin de la Société Médicale de l'île Maurice*, this remedy is prepared as follows: Take one pound of anderjou, clean, dry, and crush it. Take twenty spoonfuls of this powder, and mix intimately one spoonful of a combination of roasted anderjou with arrowroot. Divide into doses of about 6 drachms each, and take one daily, infused in about 16 ozs. of water.

The Treatment of Stricture.

In my own practice it is my rule immediately (says Dr. David C. Bryan, in the *Med. Herald* for July) on commencing to treat a case of stricture, to prescribe elixir thion compound, teaspoonful three times a day before meals for my patient, and to continue this medicine throughout the entire case. This remedy has never failed in my hands to thoroughly alkalinize the urine, to keep off rigors, and seems to have a specially relaxing effect on the tissue. When there is a false passage, put your sound in it, and pass a small filiform bougie down by its side; usually it will find the true orifice. Whatever method is tried should have a fair trial. Fickleness may result in failure.

Mammary Neuralgia.

At a recent meeting of the Paris Surgical Society, M. Routier read notes on a case of intense mammary neuralgia. The patient was 22 years of age; a small tumor, the size of a nut, was removed, and the pains completely disappeared. On microscopic examination, the tumor presented the characteristics of an adenoma.

CORRESPONDENCE.

A Case of Disease.

EDS. MED. AND SURG. REPORTER:

A case of cerebro-spinal meningitis published by Dr. Albert Wilson in the *Brit. Med. Jour.*, of April 12, 1844, and republished in the REPORTER, June 7, 1884, was reviewed by me May 16, 1885. I was impelled to review it in the hope that a careful analysis of his treatment and a fair presentation of its inefficiency, to say nothing of its danger, might save some valuable life. There was another reason for my noticing it. Three months before his case was copied by the REPORTER I had successfully treated a case more violently and suddenly attacked, by very different means—means not at all popular, but more comfortable to the patient, and more likely to avert the expense of a funeral, a matter of some importance to people of moderate means. When my review was published, it was my intention to give your readers a report of my case, and for that purpose wrote it out carefully. Though it has been laid aside for a whole year, circumstances have taken place which induce me to offer it to you. I may premise, for those who have not read Dr. Wilson's case, or my review, that his treatment was confined almost exclusively to the steady, persistent use of bromide ammonium, chloral, and at last iodide ammonium. There were given 420 grs. bro. am., 40 grs. chloral, and 20 grs. iodide ammonium in 36 hours, and that, despite the fact, as observed by him, that they "produced no soothing effect." The man was sick 48 hours, being unable to take the medicine during the last 12 hours. My case is as follows:

At one o'clock a. m., March 4, 1884, I was called to see Lizzie Samson, aged eleven years. As I had not visited any one at night for quite a long time, I asked for a history of the case, hoping that I might send something for her relief. The father said: "Lizzie was as well as usual last evening at 8½ o'clock. I then went to the barn to see that everything was right, and had been out but a few minutes, when I was called and told that she was very sick. I found her on the floor holding her face between her hands, and screaming with pain. Since then her pain has been violent. She has vomited much, and is now vomiting blood." He was so exceedingly anxious and distressed, the case seemed so unusual, and as I had attended all his children on all occasions of sickness, and was fully awake, and the night pleasant, I went to see her. Found her holding her head by a hand on each side over the temples, moaning piteously, face very pale, pulse 80, beat indistinct—by that I mean that it required close attention to count it. Some persons would have called it feeble. She lay with her eyes closed, but on opening them they seemed to be natural in size of pupil. The mother said, "she had played actively in the meadow before dark, and was apparently well during the evening, but suddenly, just before her usual bedtime, cried out, with a scream, that she had pain through her forehead, and instantly went prone on the floor. That there had been no relief since that time—then five hours after the attack—that everything she had taken had been instantly vomited, that she was dull, indisposed to answer questions, and every few minutes cried out with pain, and then relapsed into her semi-conscious condition."

On examining the fluid which she had vomited, and which they had believed to be blood, I found it a dark flocculent fluid, resembling coffee-grounds in color. I was uncertain what to do, because I did not know what was the matter with the child. It seemed from the vomiting of this dark fluid that she might be suffering from irritation

in the stomach, but as the severe pain in the head was the first symptom, I concluded to regard the brain as the seat of disease. And then morpheum to relieve the pain suggested itself, but I feared to give it without further observation of the case, and also lest the anodyne, while it might overcome somewhat the pain, would add to the dullness, so that I could not say whether the symptoms were from the disease or the remedy. I therefore had iced water put on her head, warmth and irritants to her feet, which were quite cold to my hand; ordered bro. pot. gr. x every two hours until my return, which I intended should be very soon. It was then 4 a. m. of the 12th. At 8 a. m. saw her again. She had vomited instantly after swallowing drink or medicine, and the pain in the head was so severe as to cause her to cry out frequently, and she was even duller than before, and more reluctant to reply to questions; still very pale, pulse from 80 to 90, but indistinct, some of the beats being readily felt, others scarcely perceptible. Sometimes, in cases of sickness of stomach connected with disease of brain, it is difficult to tell which is the primary affection. With me it was so here; but the severe and persistent pain in the head inclined me to locate it in the membranes of the brain, though the pale face, the condition of the pulse, and the integrity of the mind, made me doubtful. As she had been sick only twelve hours, I directed 5 grs. bro. pot. and as much bro. sod. every two hours; two bladders of ice and water to be applied on the head so as to cover it all over, the nurse being urged to keep it continuously applied. Saw her again at 1 p. m.; no change. Saw her again at 6 p. m.; duller, moaning, screaming now and then with pain; pulse 80, indistinct as before. How glad I would have been to call to my aid one of those skilled neurologists who know the exact position of every centre, have names for and know the functions of every convolution. I would have asked him why this great paleness, this unusual pulse, this pain in the forehead, this nausea and vomiting? Where is the primary affection? Is this great pain merely a neuralgia, or was there a sudden congestion? And if so, would a congestion produce so quickly a pain so violent and so unremitting? Would it too produce vomiting and dullness of the intellect? Still more would it have comforted me to have been informed of the cause of another symptom noticed by the family to-day, and to which they had just called my attention, and the significance of which they desired to know. On raising the child's head from the pillow, it would fall about as if there was not a single bone in the neck. I raised her by putting my hand over the last cervical vertebra; her head fell backwards as though she had not the least control over it. I raised the body to a perpendicular with my hand behind the head, it fell forward on the breast; leaned slightly to one side, the head fell over as though there was nothing to support it. When put on the pillow again, she seemed to have her head under control. At first I thought it probably caused by faintness from being raised; that it was not, good evidence was given as the case progressed. It would then have comforted me greatly to have been enlightened in relation to this symptom. To me the nervous system has been a lifetime study. Securely housed within the cranium and vertebra, with entire control of the most sensitive telegraphic communication to and from every part of the body, not a sight, or sound, or taste, or touch, or odor, but is instantly recognized, and its influence on the system manifested. Every movement of all parts of the body is under the control of the nervous system. It directs the action of the heart, presides over every function, regulates the vital chemistry of every molecule so as to produce the vital heat, without which life cannot be preserved for a single moment. How important then that we should read its disturbed manifestations aright, and be ready to correct them. In view of its great importance the query arose, what is the cause of this condition of the child? Why this changed, apparently enfeebled action of the heart? Why this refusal of the stomach to take its ordinary food and drink? Why this strange loss of power in the muscles of the neck, and this dullness of intellect, all so suddenly presented? Are all these caused by malaria, a name for something never yet detected? Are there germs in the blood, bacteria? If so, have these germs suddenly become virulent, and gone on the war-path, after being with her all her life and behaving themselves well? Will they now, like yeast in a mass of flour, multiply and spread themselves through every tissue, block up all the avenues in the brain, permeate its substance, and thus destroy life? Or has "septic material" which had been floating in the air, been taken into the system, and is it now corrupting her blood and weakening and disturbing the nervous system, and through it the body?

(To be continued.)

—That well ventilated bed rooms will prevent morning headaches and lassitude.

News and Miscellany.

Anatomical and Medical Knowledge of Ancient Egypt.

In the *Lancet*, July 17, we read as follows: The surviving fragments of the early literature of Egypt are mainly of a religious character; but this is not to be wondered at, for the genius of the people was essentially religious, and their doctrine of the future state leavened their national life in almost every particalar. To them the body was an integral part of the immortal humanity; therefore it could not be permitted to turn to decay, but had to be preserved from corruption that it might be a fit receptacle for the soul to dwell in through eternity. Their treatment of the body was thus dependent on their belief of its relation to the soul, and this, we learn from their religious writings, was a relationship of eternal interdependence. To secure perpetual preservation the body had to be properly embalmed, the cavities opened and subjected to the action of antiseptics. Although the body was sacred, under the special protection of the god Thoth, though each part was under the guardianship of a special divinity, yet this sacredness did not preclude careful inspection and the processes necessary for preservation, for all parts had to be perpetuated. Embalming was a religious rite, to be performed by the priests of the Cultus; and the historian Herodotus has preserved for us what is doubtless a substantially accurate account of the different methods whereby it was done in the later times in which he lived. The organs removed from the bodies of persons of the better classes were not returned into the body, but were preserved in vases of alabaster or stone, surmounted by the heads of the four divinities of Hades, the sons of Horus and Isis. The vessel which contained the stomach and colon bore the human head of Amset; that which held the lungs and heart was under the protection of the jackal-head of Tuaut-mutef; that which contained the small intestine was beneath the baboon-head of Hapi; while the liver was guarded by the hawk-head of Kabhsenuf.

During the ascendency of Greek influence in Egypt, Alexandria earned the reputation of being the chief school of anatomy and medicine in the world. Erasistratis, who lived in the days of Ptolemy Soter, B. C. 285, was an anatomist of such enthusiasm, that he and his disciples receiving from the king criminals condemned to death, "Vivos inciderint considerarintque etiam, spiritu remanente, ea quæ natura ante clausisset, eorumque posituram, colorem, figuram, magnitudinem, ordinem, duritiem, mollitiem, lævorem, contactum, processus deinde singulorum et recessus et sive quid inseritur alteri sive quid partem alterius in se recipit." But this Alexandrian school, although upon Egyptian soil, was essentially Greek in spirit; even Herophilus had learned some of his anatomy from Praxagoras of Cos, although, as the anatomy of the earlier Greek school was originally derived from Egypt, it was but returning to the mother country the traditions of culture derived therefrom. It was in Egypt Democritus of Abdera studied and so was fitted to teach anatomy to Hippocrates, the father of medicine. The three pithy and graphic letters on anatomy (which are extant), which it is supposed Democritus sent to Hippocrates, may well have been the result of his Egyptian training. At a later period, it was at Alexandria that Galen pursued his study of anatomy under Heraclianus, and the anatomical school of Alexandria survived until the Mohammedan invasion of Amru in A. D. 640. That much even of the earlier Greek medicine, anatomy and pathology was derived from Egypt, we learn both directly and indirectly. Most of the vegetable drugs in use in Greece were natives of Egypt; and Galen, speaking of one prescription called Epigonos, tells us that it was obtained from the adytum of the temple of Phtah, at Memphis. He quotes it, and other Egyptian prescriptions, from the book Narthex, written by Hera of Kappadokia. Medical colleges of far greater antiquity than that of Alexandria existed in the priestly schools of Memphis, Heliopolis, Sais, and Thebes. These were much more faithful exponents of the purely Egyptian system of the art of physic. Of the ancient medical literature of Egypt, two nearly complete treatises are still extant, and six or seven fragments of others. These vary in date and in perfection. The most complete are the Papyrus Ebers and the Medical Papyrus of Berlin. The fragments which are noteworthy are: The British Museum Papyrus, formerly the property of the Royal Institution, the Papyrus VI. of Boulaq, the Magical Papyri of Turin and Paris, the Coptic Medical Manuscript in the Borgia Library, and the Greek Papyri 383 and 384 of Leyden. In a paper read at a recent meeting of the Royal Institution of Great Britain on the Medical Knowledge of Ancient Egypt, of which the above is a summary, Professor Alexander Macalister, M. D., F. R. S., stated that he hoped soon to be in a

position to publish a detailed and critical study of this medical literature, a work for which few are better qualified.

Quackery in French Religious Communicants.

The *St. Louis M. and S. Journal* for July tells us that in a little commune of the Vendèe, near the borders of the Department of Deux-Sevres, a rural school-house shelters five or six *religieuses*. The government some time ago ceased to give them any support, so that it became necessary for them to look about for some other means of living and keeping the wolf from the door. After looking around a little, the good sisters determined to make some money out of their knowledge of the medicinal value of the herbs and simples around them, and which had hitherto been applied to the gratuitous healing of the ills of their neighbors. It seems that in some manner they had acquired a reputation for curing the goitre, and not long ago a peasant living some distance from them undertook a journey to their establishment in order to obtain from the charitable sisters the remedy for a goitre which disfigured his spouse. They gave him a box of pills and received in return six francs, and the peasant went on his way rejoicing. As luck would have it, however, the sister who was called to accompany him to the gate and let him out, inadvertently displayed the fact that she was herself afflicted with a great goitre. The patient was sharp enough to see the point, and immediately began to bellow that he was robbed. Not getting his money back, he complained to the authorities, and thus the matter stands. It has, however, served to call attention to the fact that religious communities all over France are doing the very same thing, and not only this, they are using the knowledge and facilities thus afforded them to the great detriment not only of the medical profession, but of the Government itself. Most of these communities are violently anti-republican in their sentiments, and devote their entire time to the quiet *propaganda* of monarchical and clerical ideas. This fact once brought home to the authorities ensures their suppression.

Charms and Superstitions in the Treatment of Diseases.

The *Brit. Med. Jour.* says that the Bishop of Bedford is quite at home among the people, and knows them in sickness and in health. He gives some curious examples of the still prevalent superstition as to charms against sickness, which are worth preserving among the records of medical folk-lore.

For many years he labored in a country parish in Shropshire, and the remedies believed to be efficacious in many complaints absolutely surprised him. In cases of whooping-cough, for instance, a woman would send children suffering from it along a towing-path of a canal to meet a certain boat, the reason being that the boatman was a seventh son, and any remedy suggested by a seventh son would, it was thought, do good. Another popular remedy was to pass children over and under a briar seven times; another horrible thing was to draw three yards of black ribbon through the body of a frog, and wear it round the neck; and another thing was to make a child breathe into a frog's mouth. It was supposed, too, that anybody riding on a piebald horse could cure whooping-cough. He had seen a woman pretending to charm away a tumor on the lips of another woman with elder-pith which was got at night under a full moon, and by the use of some words which, the charmer said, were in the Bible, but on being told that they were not, said she was sure they were in the prayer-book, and this was equally incorrect. A farmer, who had the toothache, had given to him some gander's teeth to put in his waistcoat pocket. These were only a few of the superstitions that had come under his notice in North Shropshire, and perhaps some of our readers can add to this curious budget of surviving superstitions.

The International Medical Congress.

"A well-known American physician writes to us from Berlin, under date of June 30, that he has lately come in contact with prominent members of the profession in that city, Bremen, Hamburg, Dresden, Munich, Vienna, and Breslau, and that everywhere the leading questions were: 'What about the Congress of 1887? Will it be held? Will it be a success? Will you be there? How much reduction will there be in the passage rates? Is it to be managed by homœopaths? Have the dissensions which threatened to wreck the Congress been adjusted? Whom shall we meet whom we know?' etc. To these queries he felt it his duty to answer: 'The Congress will surely be held. Whether it will be a success cannot now be foretold. I shall not be there. So far as I know, there will be no reduction in fares to America. The homœopaths have nothing whatever to do with the Congress. The dissensions have

not been adjusted in any sense whatever. You will be likely to meet chiefly men whom you do not know by name or fame, since the majority of the best known men in the United States have withdrawn from the Congress because they do not approve of the way in which it is managed.' 'With but few exceptions,' he adds, 'I found very little inclination to incur the trouble and expense of a trip across under such discouraging auspices. My replies only corroborated previous impressions.'"

The above is from the *N. Y. Med. Jour.*, July 24. We must say that out of respect for the profession of the United States, the *anonymous* correspondent of the *N. Y. Med. Jour.* ought to have been ashamed to write such "*reflections of his own wishes*," and the journal ought to have been ashamed to publish them.

A New Use for Carbolic Acid.

A new use for carbolic acid has been discovered by an Australian inventor, namely, for tanning leather. We had thought that Australia affords more than enough natural tanning material without this invention. In the process the skins, which have been limed in the ordinary manner, also haired and prepared if for the production of sole leather, are placed in a bath consisting of a mixture of tens gallons of water in which 200 pounds of soap are dissolved, and containing one gallon of carbolic acid, the skins being left in the bath until tanning is complete. The process may be considerably accelerated by adding a pint of fresh carbolic acid to the tanning fluid from time to time. For a softer leather the raw, limed, and haired skins are for one or two days placed in a mixture of four parts carbon bisulphide and one of carbolic acid, and then washed.

Lard.

At a recent meeting of the Philadelphia Pharmaceutical Association a member asked what was the usual practice in reference to lard for pharmaceutical uses, and what was found best. A member stated that he had lard made in the country specially for him, and found it entirely satisfactory. The inquiry was made whether the refined lard of commerce was pure enough for medicinal purposes; this was answered that one of the houses who refined very large quantities of lard stated that they made none at all, but merely refined it. It was queried, What percentage of water was present in commercial lard? but no one present stated that they knew what amount of water it did contain. The preservation of lard by means of benzoin and poplar buds was also discussed, and some thought that benzoic acid would answer as well as benzoin, while another present expressed the opinion that the resinous matter of the gum benzoin was the efficient agent.

Cholera Prospects in Paris.

A Paris correspondent telegraphs: "In consequence of the exceptional heat, and the increased consumption of spring water, the municipal reservoirs in which it is stored are well nigh empty. The municipality is, therefore, obliged to discontinue its supplies to several arrondissements. The water which is to be given instead will be taken from the Seine above Ivry." This information is justly disquieting. It may, and certainly should, be remembered that the last outbreak of cholera in Paris was traced to the temporary distribution of contaminated water under similor circumstances. The inhabitants of Paris should protest; and, meantime, visitors should be on their guard. The last epidemics, not only in Paris, but in London, Geneva, and Naples, were distinctly traceable to the water supply.

Antiseptic Paper.

Dr. Bedoin, of the military hospital of Vincennes, makes light, cheap, and effective applications for wounds by using instead of gauze, unglazed paper (filtering or cigarette paper) first sterilized in a drying cupboard at 110° C., then rendered antiseptic by immersion in a solution of carbolic or boric acid, sublimate, etc. This can be used in layers or plugs, and is covered with thin sheets of gutta-percha.

Official List of Changes

OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, FOR THE WEEK ENDED JULY 24, 1886.

Carmichael, D A., passed assistant surgeon. Granted leave of absence for thirty days, July 24, 1886.

Magruder, G. M., assistant surgeon. To proceed to Cairo, Ill., for temporary duty, July 22, 1886.

The Perfect Druggist.

This gem we cut from the presidential address of the Virginia Pharmaceutical Asso-

ciation: "There never has been a perfect druggist, and there never will be. The science of pharmacy is more or less connected with all the natural sciences, and a perfect acquaintance with them is very rare. A good pharmacist should thoroughly understand the principles of his profession as well as the responsibilities of his business, and he should have a good practical experience in all its details, without which technical knowledge does not amount to much."

Galvanic Flannel.

A novel method of applying an electric current to the body forms the subject of a patent granted to the agent of Señor Pumariega, of Avile, Spain (2,322, 1886). The inventor steeps flannel in a bath composed of equal parts of oxide of iron, copper, zinc, and tin, mixed in fine powder in weak gum-water. The flannel thus takes up a quantity of the metallic oxides which are excited by the perspiration of the body, which is then subjected to a weak but constant electric current.

Items.

—Piliganine is the name which has been given by M. Adrian to a new alkaloid which he has isolated from *Lycopodium saussures*. It has an alkaline reaction, and emits white vapors, like ammonia, in the presence of hydrochloric acid, and therefore appears to be of a volatile nature. It causes powerful emesis and catharsis.

—"The Effects of Tobacco on the Health of Men of Letters, and its Influence on the Future of French Literature," is the theme to be discussed in a series of essays, for the best of which the French Society for the Prevention of the Abuse of Tobacco offers a prize of 1,000 francs.

—It has been objected against eserine that it increases the intra-ocular pressure whilst contracting the pupil; pilocarpine, on the other hand, is said to lower the intra-ocular tension. These myotics have been set against one another in the treatment of some cases of glaucoma. Schlegel has made some experiments on the intro-ocular tension, and arrives at the conclusion that the alkaloid of jaborandi also increases the tension.

—From Saturday, July 17th, till Wednesday, July 21st, the following are the reported cholera returns from Italy: Brindisi, 28 cases and 11 deaths; at Francavilla Fontana, 66 cases and 15 deaths; at Latano, 37 cases and 14 deaths; at San Vito, 20 cases and 3 deaths; at Oria, 2 cases; at San Donaci, 4 cases and 2 deaths; at Venice, 2 cases and 2 deaths; at Codigoro, 10 cases and 2 deaths; at Erchie, 2 cases and 1 death; at Ostuni, 5 cases and 1 death.

—The *Madrid Medical Journal* of July, 1885, reports that Miss Dolores Lleonart-y-Cassanovas, daughter of Dr. Agnew Lleonart, has just obtained, by unanimity of votes, her M. D. degree at the Barcelona University, after passing a brilliant examination. Miss Lleonart commenced her studies at the age of 8, got her B. A. degree at 13, carried off seven prizes and the highest marks in every examination, and now, at 19, her full degree in medicine and surgery. It would seem that ladies mature early in Spain.

QUERIES AND REPLIES.

Information Wanted about Antipyrin.

Eds. Med. and Surg. Reporter:

I desire to trouble you for a little information in regard to "antipyrin." I have read a good deal about it in the journals, but as I do not know the writers, and am unwilling to take anybody's dictum for granted, I desire to ask you, and upon what you say I am willing to act without hesitation. Is it of any practical use, save to reduce, *rapidly*, temperature, and for that purpose is it *safe* and *reliable*? Is it a better febrifuge than aconite and nitre, with potass. bromide or soda bicarb.? My favorite fever mixture is:

℞. Tr. aconite root,	gtt. viij.
Spirits nitre,	ʒij.-iv.
Sodæ bicarb., or pot. brom. p. r. n.	
Water ad.,	ʒj.

A teaspoonful in water every half hour or hour.

In our remittent fevers, with marked congestion, the above answers well, and though slow, yet the action is permanent and entirely safe. Do you think antipyrin would do better?

We often have patients with a temperature from 104° to 105° F. Give a strong mercurial purgative, say in three doses at intervals of three hours, every half hour or hour give the above ℞., and sponge with cold or tepid water, and in from four to ten hours the temperature comes down to say 101° or so. Then give *full* doses of quinine, 10 grains every two hours till well impressed, and our patient is safe *almost invariably*. If you would advise antipyrin, in what dose and at what interval repeated?

Let me state a case I had last week. A lady was confined at five o'clock Wednesday morning; did remarkably well till Friday morning; at 8 o'clock had a severe rigor, followed by a fever; temperature 105½°, and remained so till 2 o'clock Friday night. There was great tenderness of abdomen and some tympanitis. Patient was stupid, but there was very little delirium, no nausea, and no diarrhœa; the breasts, too, were full, hard, and tender. I gave a good calomel and rhubarb purgative and the above fever mixture every half hour, and then every hour. Applied cold water to the head, which was aching badly. At 2 o'clock p. m. the thermometer marked 102½°. Gave at once 8 or 10 grs. quinine, and repeated the dose in an hour, and then in an hour again. In this time the temperature had come down to 100°, patient sweating freely. By 8 o'clock the bowels moved well, and temperature was normal and so remained. There was no more exacerbation.

Now, in such a case, would antipyrin have answered? Would it have reduced the temperature quicker, and if so, would it have done to give the quinine as I did? I know quinine is given in large doses as a febrifuge, but *unless the fever is going down when given, it has always failed in my hands.*

We have very many cases like this. A child from three to ten takes a chill, goes into a stupid condition from which it is impossible to rouse him. Cannot swallow, though pulse is good; temperature 103° to 106°. Now, could antipyrin be used efficiently with the hypodermic syringe, and in what dose? I usually pour cold water on the head and sponge the body. Give a strong enema, and as soon as the patient can swallow give the mercurial boldly, and then follow much the same plan as in the case I described above, and I don't know that I ever lost a case.

Athens, Pa. Thos. M. Matthews, M. D.